Mail to:	
Natural Diversity Database	For Office Use Only
1807 13th Street, Suite 202 Source C	ode Quad Code
Sacramento, CA 95814 Elm Code	Occ. No
Date of Field Work: EO Index	No Map Index No
month (mm) date (dd) year (yyy)	
Scientific Name: Athene cunicularia Common Name: Burrowing Dwl	
Species Found? \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Reporter: H. GREEN, T. WEBGR, J. ROCKS, P. RICHARDS, B. LOHSTE.
yes no If not, why?	Address: URS CORPORATION
Total No. Individuals Subsequent Visit? ☐ yes ☐ no Is this an existing NDDB occurrence? ☐ no ⊠unk.	1615 MURRAY CANYON A.D. SUITE 1000 SAN DIEGO, CA 92108
Yes, Occ. #	Email Address:
Collection? If yes: Museum / Herbarium	Phone: (619) 294-9400
Plant Information	Animal Information  Age Structure:
Phenology:  % vegetative % flowering % fruiting	# adults # juveniles # unknown
76 Vegetative 75 howering 76 kutting	breeding wintering burrow site rockery mesting other
Location (please also attach or draw map on back)	
Tamana. As	
County: IMPORIAC Landow	vner / Mgr.:
Quad Name:	Elevation:
Quad Name:	Elevation:  T R 1/4 of 1/4 of Section  (NA D83,NAD 27,WG584, other)  acy: Meters
Quad Name:	Elevation:  T R 1/4 of 1/4 of Section  (NA D83,NAD 27,WG584, other)  acy: Meters
Quad Name:	Elevation:  T R 1/4 of 1/4 of Section  (NA D83,NAD 27,WG584, other)  acy: Meters
Quad Name:	Elevation:  T R 1/4 of 1/4 of Section  (NA D83,NAD 27,WG584, other)  acy: Meters
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Quad Name:  T R	Elevation:  T
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Quad Name:  T R	Elevation:  T R
Quad Name:  T R	Elevation:   1/4 of 1/4 of Section   (NA D83, NAD 27, WG5 84, other)   acy: Meters   Meters
Quad Name:  T R	Elevation:  T R
Quad Name:  T R	Elevation:  T R

FG/WHDAB /1747 Rev. 11/98

CNAME	SOURCE	SITING DATE	COMMENTS	X_COORD	Y_COORD
BURROWING OWL	URS	2001/2002		-115.63184	33.17111
BURROWING OWL	URS	2001/2002		-115.64956	33.14545
BURROWING OWL	URS	2001/2002		-115.64963	33,14471
BURROWING OWL	URS	2001/2002		-115.64958	33.14396
BURROWING OWL	URS	2001/2002		-115.64965	33.14336
BURROWING OWL	URS	2001/2002	<u> </u>	-115.64966	33.14253
BURROWING OWL	URS	2001/2002		-115.64951	33,11273
BURROWING OWL	URS	2001/2002		-115.64955	33.10990
			<u></u>		
BURROWING OWL	URS	2001/2002		-115.64948	
BURROWING OWL	URS	2001/2002		-115.64944	
BURROWING OWL	URS	2001/2002		-115.64790	
BURROWING OWL	URS	2001/2002		-115.64795	
BURROWING OWL	URS	2001/2002		-115.64796	
BURROWING OWL	URS	2001/2002		-115.64792	
BURROWING OWL	URS	2001/2002		-115.64794	
BURROWING OWL	URS	2001/2002		-115.64796	
BURROWING OWL	URS	2001/2002		-115.64789	
BURROWING OWL	URS	2001/2002		-115.64800	
BURROWING OWL	URS	2001/2002		-115.64805	33.05808
BURROWING OWL	URS	2001/2002		-115.64810	33.05485
BURROWING OWL	URS	2001/2002		-115.64805	
BURROWING OWL	URS	2001/2002		-115.64936	33.05355
BURROWING OWL	URS	2001/2002		-115.70535	
BURROWING OWL	URS	2001/2002		-115.63002	
BURROWING OWL	URS	2001/2002	· · - · ·	-115.64156	-
BURROWING OWL	URS	2001/2002		-115.64663	
BURROWING OWL	URS	2001/2002		-115.63853	
BURROWING OWL	URS	2001/2002	=	-115.65000	
BURROWING OWL	URS	2001/2002		-115.65020	
	URS	<u> </u>		-115.65020	
BURROWING OWL		2001/2002			<del>-</del> -
BURROWING OWL	URS	2001/2002		-115.60648	
BURROWING OWL	URS	2001/2002	<u> </u>	-115.60680	
BURROWING OWL	URS	2001/2002	<u> </u>	-115.59819	
BURROWING OWL	URS	2001/2002	<u></u>	-115.59794	
	URS	2001/2002		-115.59975	
BURROWING OWL	URS	2001/2002		-115.58910	
	URS	2001/2002		-115.61742	
		2001/2002		-115.58056	
BURROWING OWL	URS	2001/2002		-115.58041	
	UR\$	2001/2002		-115.58040	33.16533
	URS	2001/2002		-115.58039	33.16602
	URS	2001/2002		-115.58038	33.16670
BURROWING OWL	URS	2001/2002		-115.58050	
BURROWING OWL	URS	2001/2002		-115.58126	
BURROWING OWL	URS	2001/2002		-115.58137	
BURROWING OWL	URS	2001/2002		-115.58108	
BURROWING OWL	URS	2001/2002		-115.58030	
	URS	2001/2002		-115.58015	
				-115.64825	1
	URS	2001/2002		<del></del>	
	ÜRS	2001/2002		-115.67816	<del></del>
	URS	2001/2002		-115.72394	<del></del>
	URS	2001/2002		-115.53277	
20.110	URS	2001/2002		-115.53239	
DUIDEOWING OW	URS	2001/2002		-115.50840	33.17056
BURROWING OWL BURROWING OWL	Q.10	2001/2002		-115.50677	<del></del>

CNAME	SOURCE	SITING_DATE	COMMENTS	X_COORD	Y_COORD
BURROWING OWL	บRS	2001/2002		-115.49110	33.17081
BURROWING OWL	URS	2001/2002		-115.48974	33.17090
BURROWING OWL	URS	2001/2002		-115.48688	33.17087
BURROWING OWL	URS	2001/2002		-115.45956	33.17122
BURROWING OWL	URS	2001/2002		-115.45084	33.17134
BURROWING OWL	URS	2001/2002	BURROWING OWL	-115.50882	33.17102
BURROWING OWL	URS	2001/2002		-115.50540	33,17102
BURROWING OWL	URS	2001/2002	PAIR	-115.49161	33,17098
BURROWING OWL	URS	2001/2002		-115.45072	33.17086
BURROWING OWL	URS	2001/2002		-115.48611	33.17123
BURROWING OWL	URS	2001/2002	PAIR	-115.48744	33.17124
BURROWING OWL	URS	2001/2002		-115.48882	33.17123
BURROWING OWL	URS	2001/2002	• " "	-115.54444	33.17112
BURROWING OWL	URS	2001/2002		-115.55780	33.17106
BURROWING OWL	URS	2001/2002		-115.58055	33.15533
BURROWING OWL	URS	3-5-02		-115.62093	33.17111

Mail to:			
Natural Diversity Database California Department of Fish and Game	<u>(f</u>	For Office Use Only	1 11
1807 13 <sup>th</sup> Street, Suite 202	Source Code	Quad Code	
Sacramento, CA 95814		Occ. No	
Date of Field Works month (min) date (dd) year (yyy)	<del></del> -	Map Index No	
Scientific Name: Bute o Regards Common Name: February Novs Hawk			
Species Found?		er: H.GREEN. P. RICHARDS, B.	LOHSTROH
Total No. Individuals 2 Subsequent Visit?		1615 MURINAY CANYON BP. SUT	TE 1000
Is this an existing NDDB occurrence?		SAN DIEGO, CA 92108	
Yes, Occ. #	4.1	Address:	
Collection? If yes: Museum / Herbari		(619) 294-9400	-
Plant Information		Animal Information	2
Phenology: % vegetative % flowering % fruiting	-    1	ucture: # adults # juveniles	# unknown
		preeding wintering burrow site rookery s	nesting other
Location (please also attach or draw ma			
County: + MYERIAL	Landowner (Mg).	: <u></u>	
•		F1 47	ion:
Quad Name:	····	Elevati	
Quad Name: 1/4 of 1/4 of Sect	tion T	Elevati ⋜1/4 of1/4 c	of Section
Quad Name:	tion T	Elevati R 1/4 of 1/4 of (NA D83,NAD	of Section 27,WG584, other)
Quad Name:	Datum:Point Accuracy:	Elevati R 1/4 of 1/4 of (NA D83,NAD	of Section 27,WG584, other)
Quad Name:	Datum:Point Accuracy:	Elevati R 1/4 of 1/4 of 1/4 of 1/4 of Meters	of Section 27,WG584, other)
Quad Name:	Datum:Point Accuracy:	Elevati R 1/4 of 1/4 of 1/4 of 1/4 of Meters	of Section 27,WG584, other)
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Quad Name:  T R	Datum:  Point Accuracy:  Sociates, substrates/soils, asp	Elevati R 1/4 of 1/4 of 1/4 of 1/4 of (NA D83,NAD 2) Meters Pects/slope)	of Section 27,WG584, other)
Ouad Name:  T R	Datum:  Point Accuracy:  Sociates, substrates/soils, asp  The Good Fa  RESIDETIAL  SISSION LINES W/IN A	Elevation	Slide Print
Quad Name:  T R	Datum: Point Accuracy: Sociates, substrates/soils, asp	Elevation   1/4 of	Slide Print
Quad Name:  T R	Datum: Point Accuracy: Sociates, substrates/soils, aspent  MGood DFa  RESIDENTIAL  MISSION LINES WIN F	Photographs: (check one or more) Plant/ animal Habitat	Slide Print
Quad Name:  T R	Datum: Point Accuracy: Sociates, substrates/soils, aspont  MGood  Fa  RESIDETIAL  Sission LINES W/IN A	Photographs: (check one or more) Plant/ animal Habitat Diagnostic feature	Slide Print
Quad Name:  T R	Datum: Point Accuracy: Sociates, substrates/soils, asp	Photographs: (check one or more) Plant/ animal Habitat Diagnostic feature  Meters	Slide Print

CNAME	SOURCE		DATE	COMMENTS	X_COORD _	Y_COORD
FERRUGINOUS HAWK	URS	2001/200	2		-115.52826	33.17106

Mail to: Natural Diversity Database For Office Use Only California Department of Fish and Game 1807 13th Street, Suite 202 Source Code \_\_\_\_\_ Quad Code \_\_\_\_\_ Sacramento, CA 95814 Elm Code \_\_\_\_\_ Occ. No. \_\_\_\_ EO Index No. \_\_\_\_\_ Map Index No. \_\_\_\_ Date of Field Works month (mm) date (dd) year (yyyy) Scientific Name: Plegadi S Chih Common Name: White-faced Ibis Reporter: P. Richagos, B. LOHGTOH, H. GREEN If not, why? Address: URS CORPORATION 1615 MURRAY CHAYON RD. SUITE 1000 is this an existing NDDB occurrence? \_\_\_\_\_ Ino Xunk. SAN DIEGO, CA 92108 Yes, Occ. # Email Address: Collection? If yes: \_ Phone: (619) 294-9400 Museum / Herbarium Number Plant Information Animal Information Age Structure: # juveniles # adults # unknown Phenology: % vegetative % flowering % fruiting \_\_\_\_ buπow site breeding wintering Location (please also attach or draw map on back) County: Tmperial Landowner / Mgr.: \_\_\_\_\_ Quad Name: \_\_\_\_\_\_ T \_\_\_ R \_\_\_\_ 1/4 of \_\_\_ 1/4 of Section \_\_\_ T \_\_ R \_\_\_\_ 1/4 of \_\_\_ 1/4 of Section UTM: Zone: \_\_\_\_\_(10,11) Datum: \_\_\_\_\_\_(NA D83,NAD27,WG584, other) Source: \_\_\_\_\_ (GPS, map & type, etc.) Point Accuracy: \_\_\_\_\_ Meters UTM Coordinates Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope) AGRICULTURAL FIELD Other rare species? Site Information Overall site quality: Excellent Good □Fair Poor Current / surrounding land use: ASPECUCTURE Visible disturbances / possible threats: Comments: Determination: (check one or more, and fit in blanks) Photographs: (check one or more) Slide Print Keyed (cite reference) Plant/ animal Compered with specimen housed at: Habitat Diagnostic feature Compared with photo / drawing in:\_\_\_\_ By another person (name): \_\_\_\_\_\_ May we obtain duplicates at our expense? yes no

FG/WHDAB/1747 Rev.11/99

CNAME	SOURCE	SITING_DATE	COMMENTS	X_COORD	Y_COORD
WHITE-FACED IBIS	URS	2001/2002		-115.43943	33.16994
WHITE-FACED IBIS	URS	2001/2002	FLOCK OF 40		

Natural Diversity Dat a base	<i>II</i>		1 //
California Department of Fish and Game	<u>"—</u>	For Office Use Only	1 "
1807 13 <sup>th</sup> Street, Su <b>ite</b> 202	Source Code _	Quad Code	
Sacramento, CA 95814	Elm Code	Occ. No	
Date of Field Work		Map Index No	
Scientific Name: Numenius americanus Common Name: Long Billed Curled			
Species Found? 🗵 🗌		orter: H. GREEN, P. RICHARDS, B. L.	OHSTROH
yes no If not, why?		ress: URS CORPORATION	
Total No. Individuals Subsequent Visit?		1615 MULLIMY CANYON ED. SUITE 11 SAN DIEGO, CA 92108	000
Is this an existing NDDB occurrence?		- •	
Collection? If yes:		ail Address:	<del> </del>
Number Museum / Herbariu	ım Pric	me: (GM) 277 1700	
Plant Information		Animal Information	<del></del>
	Age	Structure: # adults # juveniles #	unknown
Phenology: % vegetative % flowering % fruiting	-		
		breeding wintering burrow site rookery nest	ting other
County:	Landowner/M	Elevation	n:
T R 1/4 of 1/4 of Secti	on T	_ R 1/4 of 1/4 of :	Section
(10.11)		014 B 00 H 1 B 07	
UTM: Zone:(10, 11)	Datum:	(NA D83,NAD 27	,WG584, other)
Source:(GPS, map & type, etc.)			,WG584, other)
			,WG584, other)
Source:(GPS, map & type, etc.)  UTM Coordinates  Habitat Description (plant communities, dominants, ass  AGRICULTURAL FIELD	Point Accuracy:	Meters	,WG584, other)
Source:(GPS, map & type, etc.)  UTM Coordinates  Habitat Description (plant communities, dominants, ass  AGRICULTURAL FIEUD  Other rare species?	Point Accuracy:	aspects/slope)	,WG584, other)
Source:(GPS, map & type, etc.)  UTM Coordinates  Habitat Description (plant communities, dominants, ass  AGRICULTURAL FIELD	Point Accuracy:	Meters	,WG584, other)
Source:(GPS, map & type, etc.)  UTM Coordinates  Habitat Description (plant communities, dominants, ass  AGRICULTURAL FIEUD  Other rare species?	Point Accuracy:	aspects/slope)	,WG584, other)
Source:(GPS, map & type, etc.)  UTM Coordinates  Habitat Description (plant communities, dominants, ass  AGRICULTURAL FIELD  Other rare species?  Site Information Overall site quality:   Excellent	Point Accuracy:	aspects/slope)	,WG584, other)
Source:(GPS, map & type, etc.)  UTM Coordinates  Habitat Description (plant communities, dominants, ass  AGRICULTURAL FIELD  Other rare species?  Site Information Overall site quality: □ Excellent  Current / surrounding land use: AGRICULTURE	Point Accuracy:	aspects/slope)	,WG584, other)
Source:(GPS, map & type, etc.)  UTM Coordinates  Habitat Description (plant communities, dominants, ass  AGRICULTULAL FIELD  Other rare species?  Site Information Overall site quality: □ Excellent  Current / surrounding land use: AGRICULTULE  Visible disturbances / possible threats:	Point Accuracy:	aspects/slope)	,WG584, other)
Source:(GPS, map & type, etc.)  UTM Coordinates  Habitat Description (plant communities, dominants, ass AGRICULTULAL FIEU)  Other rare species?  Site Information Overall site quality: □ Excellent Current / surrounding land use: AGRICULTULE  Visible disturbances / possible threats:  Comments:	Point Accuracy:	aspects/slope)	,WG584, other)
Source:(GPS, map & type, etc.)  UTM Coordinates  Habitat Description (plant communities, dominants, ass AGRICULTURAL FIELD)  Other rare species?  Site Information Overall site quality: □ Excellent Current / surrounding land use: AGRICULTURE  Visible disturbances / possible threats:  Comments:  Determination: (check one or more, and fil in blanks)	Point Accuracy:	aspects/slope)	
Source:(GPS, map & type, etc.)  UTM Coordinates  Habitat Description (plant communities, dominants, ass AGRICULTURAL FIEU)  Other rare species?  Site Information Overall site quality: □ Excellent Current / surrounding land use: AGRICULTURE  Visible disturbances / possible threats:  Comments:  Determination: (check one or more, and fill in blanks)	Point Accuracy:	Aspects/slope)  Fair Poor  Photographs: (check one or more) Plant/ animal Habitat	Slide Print
Source:(GPS, map & type, etc.)  UTM Coordinates  Habitat Description (plant communities, dominants, ass AGRICULTURAL FIELD)  Other rare species?  Site Information Overall site quality: □ Excellent Current / surrounding land use: AGRICULTURE Visible disturbances / possible threats:  Comments:  Determination: (check one or more, and fil in blanks)  □ Keyed (cite reference)	Point Accuracy:	Aspects/slope)  Fair Poor  Photographs: (check one or more) Plant / animal Habitat	Slide Print
Source:(GPS, map & type, etc.)  UTM Coordinates	Point Accuracy:	Aspects/slope)  Fair Poor  Photographs: (check one or more) Plant / animal Habitat	Slide Print

CNAME	SOURCE	SITING_DATE	COMMENTS	X_COORD	Y_COORD
LONG-BILLED CURLEW	URS	2001/2002		-115.45155	33.16998
LONG-BILLED CURLEW	URS	2001/2002		-115.43274	33.18612
LONG-BILLED CURLEW	URS		FLOCK OF 15	-115.45365	33.16777
LONG-BILLED CURLEW	URS	2001/2002	FLOCK OF 15	-115.43965	33.17107
LONG-BILLED CURLEW	URS	2001/2002	FLOCK OF 15	-115.55712	33.17110

Mail to: Natural Diversity Database For Office Use Only California Department of Fish and Game Source Code \_\_\_\_\_ Quad Code \_\_\_\_ 1807 13th Street, Suite 202 Sacramento, CA 95814 Elm Code \_\_\_\_\_ Occ. No. \_\_\_\_\_ EO Index No.\_\_\_\_\_ Map Index No.\_\_\_\_ Date of Field Works month (mm) data (dd) Scientific Name: Circus cyaneus Common Name: Northern HARVIER Species Found? X | Reporter: P. Kichpros T. WEBER, H. GREEN If not, why? Address: URS CORPORATIONS 1615 MURRAY CANYON NO. SUITE 1000 SAN DIELO, CA. 92108 Total No. Individuals \_\_2\_ Subsequent Visit? 

✓ yes ☐ no Is this an existing NDDB occurrence? \_\_\_\_\_ Ino Dunk. Yes, Occ. # Email Address: Collection? If yes: Phone: ( (J9) 294 - 9400 Museum / Herbarium Number Plant Information Animal Information Age Structure: # adults # juveniles Phenology: # unknown % vegetative % flowering % fruiting breeding Location (please also attach or draw map on back) County: \_\_\_\_\_\_ Landowner / Mgr.: \_\_\_\_\_ Quad Name: \_\_\_\_\_\_ \_\_\_\_\_ Elevation: T \_\_\_\_ R \_\_\_\_ 1/4 of \_\_\_\_ 1/4 of Section \_\_\_\_ T \_\_\_ R \_\_\_\_ 1/4 of \_\_\_\_ 1/4 of Section \_\_\_\_ UTM: Zone: \_\_\_\_\_(10, 11) Datum: \_\_\_\_\_ (NA D83,NAD 27, WG584, other) Source: \_\_\_\_\_(GPS, map & type, etc.) Point Accuracy: \_\_\_\_\_\_ Meters UTM Coordinates Habitat Description (plant communities, dominants, associates, substrates/solls, aspects/slope) FORDGING IN AGRICULTURAL FIELD. Other rare species? Site Information Overall site quality: Excellent Good □Fair ĎPoor Current / surrounding land use: Abrillative Visible disturbances / possible threats: Comments: Determination: (check one or more, and fit in blanks) Photographs: (check one or more) Slide Print ☐ Keyed (cite reference): Plant/ animal Compared with specimen housed at: Habitat Compared with photo / drawing in: Diagnostic feature By another person (name): \_\_\_\_\_ May we obtain duplicates at our expense? ☐ yes ☐ no

FG/WHDAB/1747 Rev.11/99

CNAME	SOURCE	SITING_DATE	COMMENTS	X_COORD	Y_COORD
NORTHERN HARRIER	URS	2001/2002		-115.65065	33.10685

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Mail to: Natural Diversity Database For Office Use Only California Department of Fish and Game Source Code \_\_\_\_\_ Quad Code \_\_\_\_ 1807 13th Street, Suite 202 Sacramento, CA 95814 Elm Code \_\_\_\_\_ Occ. No. \_\_\_\_ EO index No. \_\_\_\_\_ Map Index No. \_\_\_\_ month (mm) dete (dd) year (nyy) Scientific Name: Polioptila Caerulea Common Name: BLUE- GLAY GNATCATCHERE Reporter: P. RICHARDS, B. LOHSTRUH, H. GLEEN Species Found? 🛣 🔲 Address: 1015 MUNNAY CANYON NO. SUITE 1000 If not, why? SAN DIEGO, CA 92168 Is this an existing NDDB occurrence? \_\_\_\_\_ no Munk. Yes, Occ. # Email Address: Collection? If yes: Phone: (619) 294-9400 Museum / Herbarium Number Plant Information Animal Information Age Structure: # juveniles # adults # unknown Phenology: % vegetative % flowering % fruiting  $\Box$ breeding wintering burrow site rookery Location (please also attach or draw map on back) County: \_\_\_\_\_\_ Landowner / Mgr.: \_\_\_\_\_ Quad Name: \_\_\_\_\_ T \_\_\_\_ R \_\_\_\_\_ 1/4 of \_\_\_\_ 1/4 of Section \_\_\_\_ T \_\_\_ R \_\_\_\_ 1/4 of \_\_\_\_ 1/4 of Section \_\_\_\_ UTM: Zone: \_\_\_\_\_(10, 11) Datum: \_\_\_\_\_(NA D83,NAD 27,WG584, other) Source: \_\_\_\_\_ (GPS, map & type, etc.) Point Accuracy: \_\_\_\_\_ Meters UTM Coordinates Habitat Description (plant communities, dominants, associates, substrates/solls, aspects/slope) Other rare species? Site Information Overall site quality: Dexcellent □Good 1254Fair Poor Current / surrounding land use: Abracut we Visible disturbances / possible threats: Comments: Determination: (check one or more, and fil in blanks) Photographs: (check one or more) Slide Print Keyed (cite reference) Plant/ animal Compared with specimen housed at: Habitat Diagnostic feature Compared with photo / drawing in: By another person (name): May we obtain duplicates at our expense? yes no

FG/WHDAB/1747 Rev.11/98

CNAME	SOURCE	SITING_DATE	COMMENTS	X_COORD	Y_COORD
BLUE-GRAY GNATCATCHER	URS	2001/2002		-115.73177	33.05280
BLUE-GRAY GNATCATCHER	URS	2001/2002		-115.74815	33.04654

#### JURISDICTIONAL DELINEATION REPORT

SALTON SEA UNIT 6 CALIPATRIA, CALIFORNIA

PREPARED FOR

CE OBSIDIAN ENERGY LLC

URS PROJECT No. 58-00161046.03 00800

JULY 11, 2002

# JURISDICTIONAL DELINEATION REPORT

# SALTON SEA UNIT 6 GEOTHERMAL POWER PLANT CALIPATRIA, CALIFORNIA

Prepared for

CE Obsidian Energy LLC 7030 Gentry Road Calipatria, CA 92233

URS Project No. 58-00161046.03 00800

July 11, 2002

# **URS**

1615 Murray Canyon Road, Suite 1000 San Diego, CA 92108-4314 619-294-9400 Fax: 619-293-7920

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Appendix C	Obsidian B	utte Road Improvement and Pipeway Detail	

#### 1.1 PROJECT DESCRIPTION

The Salton Sea Unit 6 geothermal power plant (SSU6) is a proposed, nominally rated 185-mcgawatt (MW) net plant to be located on approximately 80 acres within a 160-acre parcel approximately 1,000 feet southeast of the Salton Sea in Imperial County. The SSU6 plant site would incorporate a turbine generator area, resource production facility, separation/brine clarification area, electrical/control building area, cooling towers, filter press, electrical switchyard, brine pond, water pond and power generation facility rain water run off basin, emissions control equipment, parking area, and a construction lay-down area. In addition to the plant site, ten production wells on five well pads, seven injection wells on three well pads, and two plant wells on two existing well pads would be located near the plant site, along with pipelines connecting them to the plant site. A 500-foot water supply pipeline would connect the plant site with an existing water supply canal, pass under Boyle Road and run along the southern boundary of the plant site.

The proposed interconnection of the facility to the Imperial Irrigation District's (IID's) existing transmission system would be via a new substation south of McKendry Road and east of Severe Road. A 16-mile, double-circuit transmission line, which would be built at 230 kV but operated at 161 kV (L-Line Interconnection), would be constructed to the south to connect the new substation to the existing L-Line, located southwest of Highway 86 and Bannister Road. This proposed transmission line would run through approximately 2.8 miles of BLM land before connecting to the L-Line. The L-Line eventually connects to IID's existing El Centro and Avenue 58 substations. Additionally, a 15-mile, single-circuit transmission interconnection line (IID Midway Interconnection), which would be built at 230 kV but operated at 161 kV, would be constructed to the east to connect the new substation to the existing Midway 230 kV substation east of the proposed plant site. The 230 kV Midway substation would have a 161 kV line termination, a 161 kV breaker, and a 161/230 kV transformer installed for connection of this proposed transmission line.

The area around the proposed SSU6 is used primarily for agriculture and geothermal purposes. The project site is within Imperial County's Geothermal Overlay Zone, which consists of approximately 111,444 acres of land identified as suitable for geothermal power production. The town of Calipatria is a little over 6 miles southeast of the project site, and the town of Niland is approximately 7.5 miles to the northeast. The Sonny Bono Salton Sea National Wildlife Refuge (Refuge) is immediately northeast of Production Well Pad OB1 (Figure 1).

Construction of a pipeline between Production Well Pad OB3 and the power plant site would affect wetlands over which the U.S. Army Corps of Engineers (Corps or ACOE) has jurisdiction pursuant to Section 404 of the Clean Water Act. Placing Production Well Pad OB3 on Obsidian Butte requires widening of the access road to Obsidian Butte to accommodate the transportation of drill rigs to the well pad, and construction of a pipeline connecting wells on OB3 to the plant. The pipeline supports would be placed on the south side of the widened road (Figures 2 and 3).

The access road to Obsidian Butte is used to provide service to a gravel pit on Obsidian Butte. The road is approximately ten feet wide, and varies along its length. To provide a route for the drilling rigs that would be required to construct the two production wells on Obsidian Butte, the road would be widened by approximately 15 feet, providing a 25-foot wide road surface. The widening would occur along the south side of the existing road with standard civil construction equipment, including dump trucks, bulldozers, compacting machines and grading machines.

Installation of the pipeline would require installing approximately 20 pipe supports along the 600-foot distance (one support every 30 feet). The pipe supports would be 12 feet wide and would be constructed of steel. Each support would be elevated above grade and supported by two piles, each approximately 14 inches in diameter. One of each pair of piles would be driven along the road slope and the other driven directly in the water. Construction of the pipeline would require cranes, a pile driving machine, forklifts, welding machines and small trucks.

The pipeline that carries brine over the wetlands would be concrete-lined carbon steel and would be contained within a second, outer carbon steel pipeline. The chamber between the inner and outer pipes would be monitored to detect a potential leak in the inner brine-carrying pipe. The outer carbon steel pipe would be designed to contain brine that might leak from within the inner pipe before the inner pipe could be shut down, at which time brine collected in the outer pipe would be bled off and disposed of properly. A four-inch carbon steel pipe would run from the east end of the pipeline bridge to the brine pond at the power generation facility. The purpose of this four-inch pipe would be to dispose of brine that leaked from the inner pipe into the chamber between it and the outer pipe.

Once operational, the brine pipeline would be subject to Nondestructive Examination (NDE) monitoring. NDE monitoring uses a transducer that transmits and receives an ultrasonic signal, gives the NDE technician a display of the wall thickness of the pipe on a liquid crystal display, and stores the data digitally for archiving and analysis. (The frequency range of the transducers is 2.25 megahertz to 10 megahertz. These signals will not travel in air, can be introduced only into the pipe through the use of the ultrasonic couplant, and are contained within the localized entry site.) The transducer will access the inner pipe through boroscopic windows (closed during normal operation) approximately every 50 feet in the outer pipe. Through NDE monitoring, thinning areas of the piping system can be detected and "mapped" for analysis. A pipe can be replaced as it reaches minimum allowable operating thickness, while areas with remaining useful life continue to be monitored for corrosion. Corrosion rates have been determined through past inspections and data comparison.

Currently, guided wave ultrasonics and electromagnetic acoustic transmission (EMAT) are being jointly researched by the Brookhaven National Laboratory and CalEnergy Operating Company (CEOC), an affiliate of CE Obsidian Energy LLC (CEOE), and may be incorporated into the inspection plan. Both of these new methods are intended to enhance the current program by increasing defect detectability, and increasing the data acquisition rate.

CEOE also will have in place, before pipeline construction is begun, emergency response/contingency plans addressing identification, notification, and containment to guide employee actions in the event of a leak.

#### 1.2 PROJECT NEED

The proposed project will help meet future energy demands of Imperial County and continue to diversify energy sources in southern California. The project would use geothermal energy that would be available 24 hours per day, 365 days per year, and would have an average availability of 95 percent or higher, compared with 60 to 70 percent for coal and nuclear power plants (EREN web site). The output of the facility has already been contracted by IID, which would ensure the purchase and use of the energy. By providing clean, efficient power using renewable

geothermal resources in the first quarter of 2005, the SSU6 will help to fulfill the long-term energy needs of California.

This report addresses potential impacts to "waters of the United States" resulting from the proposed project and mitigation measures to reduce these impacts to below a level of significance. The term "waters of the U.S." covers many types of waters, including waters currently or historically used in interstate or foreign commerce, including all waters subject to the ebb and flow of tides; all interstate waters, including interstate wetlands; all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, etc., the use, degradation, or destruction of which could affect interstate or foreign commerce; all impoundments of waters otherwise defined as waters of the U.S.; tributaries of waters of the U.S.; territorial seas; and wetlands adjacent to waters of the U.S. (ACOE, 1987). A formal wetland delineation conducted according to California Department of Fish and Game (CDFG) and Corps protocols is provided.

#### 2.1 INTRODUCTION

The Corps, through the authority of Section 404 of the Clean Water Act, is the primary agency involved in wetland regulation. The Environmental Protection Agency (EPA) has the authority to veto any decision by the Corps on Section 404 permit issuance, as the EPA has the ultimate authority over enforcement of wetland regulations. Before the issuance of a Section 404 permit by the Corps, the Regional Water Quality Control Board (RWQCB) must issue a Section 401 water quality certification or waiver. In this way, the RWQCB regulates actions permitted by the Corps under Section 404 of the Clean Water Act. Additionally, the Corps must consult with the U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7 of the federal Endangered Species Act (ESA) if wetland impacts may adversely affect federally listed species. The Corps has jurisdiction over "waters of the U.S." under Section 404.

The CDFG also has jurisdiction over lakes, rivers, and streams pursuant to Section 1603 of the California Fish and Game Code. Jurisdiction extends across the beds, banks, and channels of these features and includes areas beneath a riparian canopy, even if the canopy areas are well away from the stream channel (such as in oak riparian areas). More typically, the jurisdiction over streambeds is applied from the top of one channel bank to the top of the opposite bank.

#### 2.2 METHODS

URS Corporation (URS) used methodology for delineating federal wetlands as set forth by the Corps in its Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest (June 2001) and the Corps of Engineers Wetlands Delineation Manual (1987). The routine onsite determination method can be used to gather field data at potential wetland areas for most projects. Visual observations of vegetation types and/or hydrology are used to locate areas for evaluation. At each evaluation area, several parameters are considered to determine whether the sample point is within a wetland. Three criteria must be fulfilled to classify an area as a jurisdictional Corps wetland: (1) the presence of hydrophytic vegetation, (2) the presence of hydric soils, and (3) the presence of wetland hydrology. Details of the application of these techniques are described below.

## 2.2.1 Hydrophytic Vegetation

The hydrophytic vegetation criterion is satisfied at a location if greater than 50 percent of all dominant species within the vegetation unit have a wetland indicator status of obligate (OBL), facultative wetland (FACW), or facultative (FAC) (ACOE, 1987). An OBL indicator status refers to plants that have a 99 percent probability of occurring in wetlands under natural conditions. A FACW indicator status refers to plants that usually occur in wetlands (67 to 99 percent probability) but are occasionally found in non-wetlands. A FAC indicator status refers to plants that are equally likely to occur in wetlands or non-wetlands (an estimated probability of 34 to 66 percent). Wetland indicator status used for this report follows those of the National List of Plant Species that Occur in Wetlands: California (Region 0) (Reed, 1988).

### 2.2.2 Hydric Soils

The hydric soil criterion is satisfied at a location if area soils can be inferred or observed to have a high groundwater table, if there is evidence of prolonged soil saturation, or if there are any indicators suggesting a long-term reducing environment in the upper 18 inches of the soil profile. Reducing conditions are most easily assessed using soil color. Soil colors were evaluated using the Munsell Soil Color Charts (Munsell Color, 1994).

## 2.2.3 Wetland Hydrology

The wetland hydrology criterion is satisfied at a location based on conclusions inferred from field observations, which indicate that an area has a high probability of being inundated or saturated (flooded, ponded, or tidally influenced) long enough during the growing season to develop anaerobic conditions in the surface soil environment, especially the root zone (ACOE, 1987).

Areas meeting all three of these parameters would be designated as Corps-jurisdictional wetlands. If the delineator cannot confirm the presence of all three parameters but nevertheless strongly believes the area to be a wetland, supporting arguments can be added to the delineation data sheet or report.

CDFG jurisdiction was assessed for all on-site, potentially jurisdictional areas. The methodology for calculating the area of CDFG jurisdiction was assessed by measuring the width of the defined channel taken from bank to bank.

A jurisdictional delineation was performed per Corps and CDFG protocol by URS biologists Heather Green and Phillip Richards on November 15 and 20, 2001. Several Corps-jurisdictional areas were detected from this delineation. Areas found to be under Corps jurisdiction are also under CDFG jurisdiction. The jurisdictional boundaries were mapped onto aerial photographs in the field. Jurisdictional resources were digitized, and the jurisdictional aereage was subsequently calculated. Wetland delineation points were selected to be representative of each distinct plant community type near the project that might occur in a wetland. In accordance with Corps procedures for delineating wetlands, hydrophytic vegetation was identified, presence or absence of hydrology was noted, and soil samples were taken in potential wetland areas. Mapping was completed on aerial photographs (1 inch = 100 feet). Data sheets for the wetland determinations are provided in Appendix A. Photographs were taken and are provided in Appendix B.

# 2.2.4 On Site Physiogeography

Corps and CDFG wetlands were identified during the November 15, 2001, visit to the project site. SSU6 would be placed within an existing agricultural field, and all production wells and injection wells would be placed within upland habitat. The plant site and production wells are within several thousand feet of the Salton Sea (Figure 1). The Salton Sea and associated wetlands are adjacent to the proposed road widening/pipeline crossing area.

### 2.2.5 Vegetation

Vegetation associated with the pipeline crossing from the plant site to Production Well Pad OB3 is dominated by open water associated with the Salton Sea (Figure 2). There are several areas of brackish water marsh, which is dominated by wide-leaved cattail (*Typha latifolia*) and common reed (*Phragmites australis*). Brackish water marsh in this area is assumed to be jurisdictional, as all vegetation within these areas displayed OBL plant species. Large areas of desert saltbush scrub adjacent to the ponded areas are dominated by saltbush (*Atriplex canescens*). Tamarisk scrub dominates the westernmost portion of the area, where the pipeline will cross riparian habitat. The dominant species within this habitat type is tamarisk (*Tamarix ramosissima*).

## 2.2.6 Hydrology

Substantial signs of hydrology were not detected in the surveyed area. Both test pits passed the "FAC-Neutral" test, but because two secondary indicators of wetland hydrology must be observed, it was determined that there was no wetland hydrology in these areas. There is low probability of these areas being inundated or saturated long enough during the growing season to develop anaerobic conditions in the surface soil environment.

#### 2.2.7 Soils

According to the Soil Survey for Imperial County, California, conducted by the United States Department of Agriculture, Soil Conservation Service and Forest Service (issued December 1973), soils associated with the project area consist of the following types:

**Torriorthents-Rock outcrop complex, 5 to 60 percent slopes.** This complex consists of about 20 percent volcanic rock outcrop and 80 percent soil material that has little or no profile development. The Torriorthents are excessively drained, loam to loamy sand soils, with 15 to 35 percent rock fragments, formed in unconsolidated materials. These soils range from very shallow on the upper slopes to several feet deep on the toe slopes. Most of these areas are more than 60 inches deep. This type of soil was within Test Pit 1, which is adjacent to the proposed fill of jurisdictional waters of the U.S. This soil is not typically known to be hydric.

Holtville silty clay, wet. Nearly level, very deep, stratified soil formed in alluvial sediment on floodplains and alluvial basin floors. Irrigation has caused a perched water table at a depth of 36 to 60 inches, and the water table can rise to within 18 inches of the surface during periods of heavy irrigation. Soil is light brown silty clay from 0 to 17 inches, light brown to very pale brown silty clay and silt loam from 17 to 18 inches, and very pale brown loamy very fine sand from 18 to 60 inches, with sandy material below 60 inches in some areas. This type of soil was within Test Pit 2, which was dug at the northeast edge of where Production Well Pad OB1 is proposed. This soil is not typically known to be hydric.

#### 2.2.8 Results and Discussion

Based on the jurisdictional delineation performed on November 15 and 20, 2001, the area that will be filled is composed of the following wetland resources: 0.05 acres of brackish marsh, 0.03 acres of other waters of the U.S. in the form of open water, and 0.02 acres of desert sink

scrub, for a total of 0.1 acres under Corps jurisdiction. A total of 0.4 acres is under CDFG jurisdiction, which includes the previously mentioned vegetation types and an additional 0.3 acres of impact to tamarisk scrub. Two test pits were dug along the proposed pipeline alignment within potentially jurisdictional areas.

Test Pit I was dug within tamarisk scrub habitat adjacent to the existing dirt road/levee to Obsidian Butte (Figure 2). Vegetation surrounding the soil pit included tamarisk (*Tamarix ramossisima*, FACW) and pickleweed (*Salicornia virginica*, OBL). Soil within this pit was 7.5YR 4/3, which is not indicative of hydric soil. There was a large amount of pumice (40 to 50 percent) within the soil pit throughout the soil. This is indicative of Torriorthents-Rock outcrop complex, which is the soil type within the area of this pit. These soils are excessively drained, loam to loamy sand soils, which are not hydric. The area surrounding this pit did not show any indicators of hydrology. The area surrounding this pit is not considered a Corps-jurisdictional wetland but is considered jurisdictional by the CDFG. The corresponding wetland data sheet is included in Appendix A.

Test Pit 2 was dug within an earthen drainage ditch adjacent to an existing agricultural field within Refuge property (Figure 2). Vegetation surrounding this pit included four-wing saltbush (Atriplex canescens, FACU), tamarisk (Tamarix ramossisima, FACW), and desert mallow (Malvella leprosa, FAC+). Soil within this pit was 7.5YR 4/3, which is not indicative of a hydric soil. Additionally, the pit was dug within Holtville silty clay, which has a perched water table but is not indicative of hydric soil. The area surrounding this pit did not indicate any indicators of wetland hydrology. Hydrology in this area may be influenced by agricultural runoff. The area surrounding this pit is not considered a Corps-jurisdictional wetland but is considered jurisdictional by the CDFG.

Other waters of the U.S. in the form of open water associated with the Salton Sea were also detected on site. These areas are both Corps and CDFG-jurisdictional. The ordinary high water marks in these areas were approximately 6 inches. The project will fill approximately 0.03 acres of other waters of the U.S. in the form of open water habitat.

Brackish water marsh within the project area is also Corps-jurisdictional, as it has only OBL wetland plant species and is therefore assumed to be a wetland. Brackish water marsh and saltbush scrub are also CDFG-jurisdictional. The project will fill approximately 0.05 acres of brackish water marsh.

#### 2.3 PERMITTING

Any project impacts to jurisdictional wetlands will require a Corps permit pursuant to Section 404 of the Clean Water Act. The project also will be required to obtain a Streambed Alteration Agreement, pursuant to Section 1603 of the California Fish and Game Code. Coordination will also occur with the USFWS pursuant to Section 7 of the federal ESA, and with CDFG pursuant to Section 2080.1 or 2081 of the California Endangered Species Act.

### 2.4 MITIGATION

Impacts to 0.05 acres of brackish marsh, 0.03 acres of other waters of the U.S., 0.02 acres of desert sink scrub, and 0.33 acres of tamarisk scrub will be mitigated through the creation or enhancement of wetland habitat near the project.

CEOE proposes to provide or cause to be provided a suitable mitigation site where wetlands creation or enhancement can be conducted to mitigate the proposed loss of wetland resources at a mitigation ratio of 2:1 for a total of approximately 0.8 acres of habitat.

#### 3.1 LEGAL STANDARD

No fill of waters of the U.S. is permitted if there is a "practicable alternative" to the proposed project that would have a less adverse effect on the aquatic system, as long as the alternative does not have other significant adverse environmental consequences (40 CFR 230.10 [a]). An alternative is "practicable" if it "is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes" (40 CFR 230.10[a]; 230.10[a][2]). Areas not currently controlled or owned by the applicant but that "could reasonably be obtained" may be considered to analyze potential project alternatives (40 CFR 230.10[a]; 230.10[a][2]).

URS and CEOE have analyzed the following alternative alignments for the proposed pipeline crossing for the SSU6 project to accomplish a comprehensive alternatives analysis consistent with Section 404 (b)(1) of the Clean Water Act.

The purpose and need for the proposed pipeline crossing is to transport brine from proposed Production Well Pad OB3 to the proposed SSU6 energy facility for use as geothermal energy. The purpose and need for the proposed road widening is to allow drill rigs access to Production Well Pad OB3. To accomplish these actions, it is necessary to cross areas of jurisdictional waters of the U.S.

#### 3.2 ALTERNATIVES

# 3.2.1 Alternative 1 – Underground Pipe Alternative

As an alternative to the proposed alignment of the pipeline from Production Well Pad OB3 to the plant site shown on Figure 1, burying the pipeline in the existing road was evaluated.

## 3.2.1.1 Wetland Impact

The pipe support requires at least 16 feet in width when buried under a road, as defined in Section C of Drawing No. 22-024-CV-SK003 "Obsidian Butte Road Improvement and Pipe Way Detail," shown in Appendix C. The existing road across the section currently is a minimum width of 10 feet, and would have to be widened by 10 feet to contain the piping structure and maintain sufficient cover.

To support the equipment required to install, operate, and maintain buried piping, the existing road would have to be widened by 25 feet, as shown in Section A of the same drawing, instead of the 15 feet required for the proposed action.

# 3.2.1.2 Operation, Maintenance, and Safety Impact

Because of the corrosive nature of the brine, NDE monitoring, as described in Section 1.1, is performed regularly at nearby geothermal facilities owned by CEOE affiliates to confirm pipe integrity. Such testing requires easy access to the structures, thereby requiring buried piping to be limited in length to the shortest possible distance (for road crossings, for instance). A design contemplating the burial of concrete-lined carbon steel pipe along 600 feet or more would be unacceptable from operational, maintenance, and safety standpoints.

#### 3.2.1.3 Cost Impact

This alternative would require approximately twice the amount of fill material to widen the road and bury the pipeline, resulting in an estimated additional installed cost of \$250,000. The additional cost of creating a concrete channel to bury the pipeline would offset the cost of the piping supports included in the preferred alternative. This alternative, therefore, would cost approximately \$250,000 more than the preferred action.

### 3.2.2 Alternative 2 – Alternative Pipe Route

As an alternative to the proposed alignment of the pipeline from Production Well Pad OB3 to the plant site as shown on Figure 1, rerouting the geothermal fluid conveyance pipeline has been evaluated. Under this alternative, the proposed geothermal fluid conveyance pipeline would be routed toward the southwest, in the direction of the existing levee, which runs from north to south from Obsidian Butte to Grubel/Peterson Road. The pipeline would then follow the edge of this levee and turn east onto Grubel/Peterson Road, on the southern side of the road, within agricultural land. The pipeline would then turn north, along the castern side of Severe Road, and terminate at the power plant site.

#### 3.2.2.1 Wetland Impact

This alternative would require 3,500 more feet of piping than the preferred action, which includes a 1,500-foot pipeline. This alternative also would result in impacts to 0.45 acres of waters of the U.S, compared to the preferred action's impact to .10 acres of Corps-jurisdictional waters.

## 3.2.2.2 Sensitive Species

Because this alternative would affect a larger area of open waters of the U.S., it has potential to affect an area potentially suitable for desert pupfish. Under this alternative, the pipeline also would be adjacent to a drainage ditch with potential Yuma clapper rail habitat.

## 3.2.2.3 Cost Impact

Approximately 3,500 additional feet of piping would be required for this alternative, which would result in an additional cost of \$1.76 million for the pipeline itself. There also would be additional costs associated with increased fill material, loss of heat during transfer because of the extra length of the pipeline, and a greater potential for repair and maintenance.

#### 3.2.3 Alternative 3 – No Action Alternative

The No Action Alternative represents the "status quo" condition – no geothermal power plant project. The No Action Alternative is considered impractical and infeasible for several reasons associated with economics, public interest, and sensitive species habitat.

#### Economics and Public Interest

Failure to collect geothermal fluid in the reserve on Obsidian Butte from Production Well Pad OB3 would substantially restrict geothermal energy production capacity to the proposed plant, thereby making it impracticable and infeasible.

The project as proposed incorporates the only layout that is feasible and practicable for the generation of geothermal energy from the Salton Sea Geothermal Field ("Field"). The proposed wellfield and plant site layout provides the required energy production using the available acreage, at the closest spacing possible without undue interference between wells, while sustaining production over the life of the project.

The Salton Sea Field is bisected by a main fault that runs west-southwest to east-northeast. The fault is illustrated on Figure 3. Brine temperatures become cooler south of the fault and cannot support geothermal energy production. Wells that gather the hot brine from which electricity is generated (production wells) are therefore located north of the fault. Wells that inject the spent brine back into the ground (injection wells) are located south of the fault.

Wells are sited to ensure responsible use and management of the geothermal resource. Proper distance must be maintained between production areas to ensure that the production wells receive adequate pressure support to maintain their productivity. Similarly, production and injection areas must be properly spaced. For instance, in the western portion of the Field, production and injection occur close together because the fault is considered a scaling fault, or diffusion boundary. East of this portion of the Field, the fault is not considered a scaling fault, so additional distance is needed between production and injection wells. Additionally, injection and production must be planned so that injection occurs at a structurally lower level than production, as gravity will work to force the heavier, cooler fluids under the hotter, less dense fluids to heat before proceeding to the production wells, preventing premature breakthrough. The drainage areas and injection areas for the existing power plants are shown on Figure 3, as are existing condensate and/or pond injection areas.

The general principles used in locating the wells for SSU6 were as follows:

- 1. Production wells would be located north of the main fault.
- 2. Development would be as close to the main fault as possible.
- 3. Separation would be maintained between production and injection wells to prevent premature breakthrough of injection fluids.
- 4. Production wells would be spaced to prevent any decline in the production rates for existing geothermal plants.
- 5. Wells would be spaced to ensure adequate resource to support required production rates for the life of the proposed project. Only two wells would be allowed per pad to prevent/limit interference between wells at the casing shoe. Well pads would have adequate distance between them to prevent interference.

#### Individual Well Pad Locations

OB5 (Pad L), with wells 18-33 and 18-33b, will fully develop an undeveloped area between Regions I and II that is not in the primary drainage area of any currently producing wells. With both Regions I and II production wells pulling on this area, it is critical not to overdevelop it.

OB4 (Pad C, on the plant site), with wells 16-33 and 16-33b, will drain remaining undeveloped area between Regions I and II and the area just off the northwestern edge of Region II.

OB2 (Pad J, just north of the plant site), with wells 24-33 and 13-33, will drain the area just off the northern edge of Region II.

The above wells are all adjacent to existing plant wellfields. Reservoir modeling has determined that bringing these wells any closer to the existing plants or additional new project wells would severely affect the decline rates of existing wells and new project wells. Additional resource must therefore come from a second tier of wells located farther from existing production.

The four remaining wells are drilled from pads located farther outside the first tier of target zones, to allow the reach of the wells to extend far enough to avoid interference with the drainage areas of other wells.

OB1 (Pad N, northeast of Pad J), with wells 43-33 and 42-33, will drain acreage that is critical to providing the proper amount of resource to support the proposed plant.

OB3 (Pad I, on Obsidian Butte), with wells 55-32 and 55-32b, is sited to allow drilling at a sufficient distance from existing production areas. It would be impossible to reach west beyond the drainage area of wells 16-33 or 16-33b without placing a well pad on Obsidian Butte. Draining this acreage is critical to having the proper amount of resource to support the proposed plant.

The injection area was sited south of the main fault and at an adequate distance from existing or new production wells, in an area that would not be considered for production yet is close enough to give pressure support. While the development of the SSU6 wellfield northwest of Region II lowers the pressure support to Region II, the addition of the additional SSU6 injection to the southeast will increase pressure support to the existing Region II, balancing the pressure support lost from the new northwest production development.

While Figure 4 shows graphically the basic interaction of the drainage areas of the wells, it is a simplification of the reservoir dynamics. Reservoir properties vary in lateral distance and depth, and are interdependent. The reservoir properties and response of production of the Field have been mathematically modeled and history matched to existing data from over 10 years of production. The layout of the proposed SSU6 has been entered into this numerical model to forecast its effect on the reservoir and existing wellfields over the life of the plant. Location, spacing, production rates, and pressure support have been balanced to provide the optimum wellfield for SSU6 using the above criteria.

Failure to construct the proposed project would not be in the public interest, because it would not result in new electricity generation from a renewable source and would not result in projected economic benefit to the area. CEOE estimates that the project would provide approximately \$3 million per year in property taxes. Under the current assessment method, this money would accrue to Imperial County and be distributed among several funds, including local schools.

There would be approximately 449 professional workers employed during peak construction. Approximately 69 permanent employees are expected to staff the plant after its completion with an associated annual payroll of \$6 million.

CEOC has entered a 20-year power sale agreement with IID for approximately 93 percent of the design output of the facility. The proposed geothermal facility will effectively protect approximately one fifth of IID's portfolio from fuel price fluctuations while providing a reliable and renewable energy source to the community.

### 3.2.3.1 Sensitive Species and Habitat

Under the No Action Alternative, existing land uses, including agricultural production, would remain on site. Any potential impacts to sensitive species and habitat associated with the proposed project would not occur.

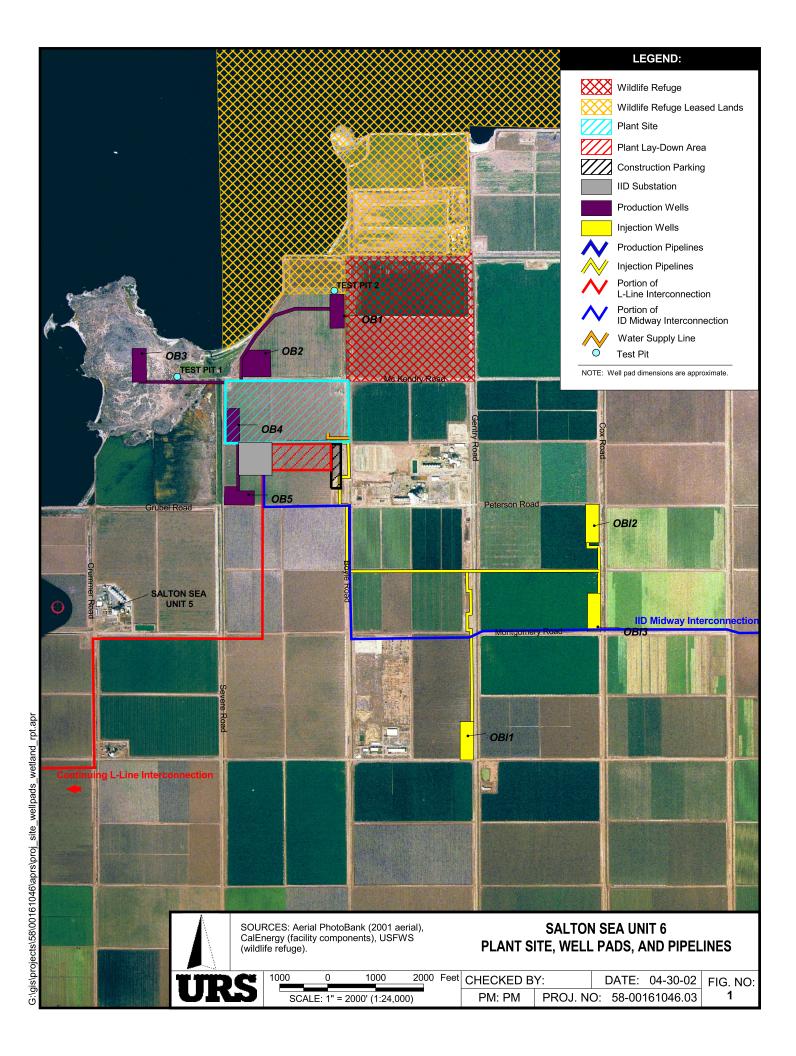
### 3.3 CONCLUSION

The preferred action is superior to the other alternatives because it results in the least amount of wetland and sensitive species impacts and is preferable based on operation and maintenance, safety, and economic factors. Therefore, URS recommends the proposed action presented in Drawing Nos. 22-024-CV-SK003 and -SK004, "Obsidian Butte Road Improvement and Pipeway Detail" described in the project description and shown in Appendix C.

Cylinder, P.D., K.M. Bogdan, E.M. Davis, and A.I. Herson, 1995. "Wetlands Regulation."

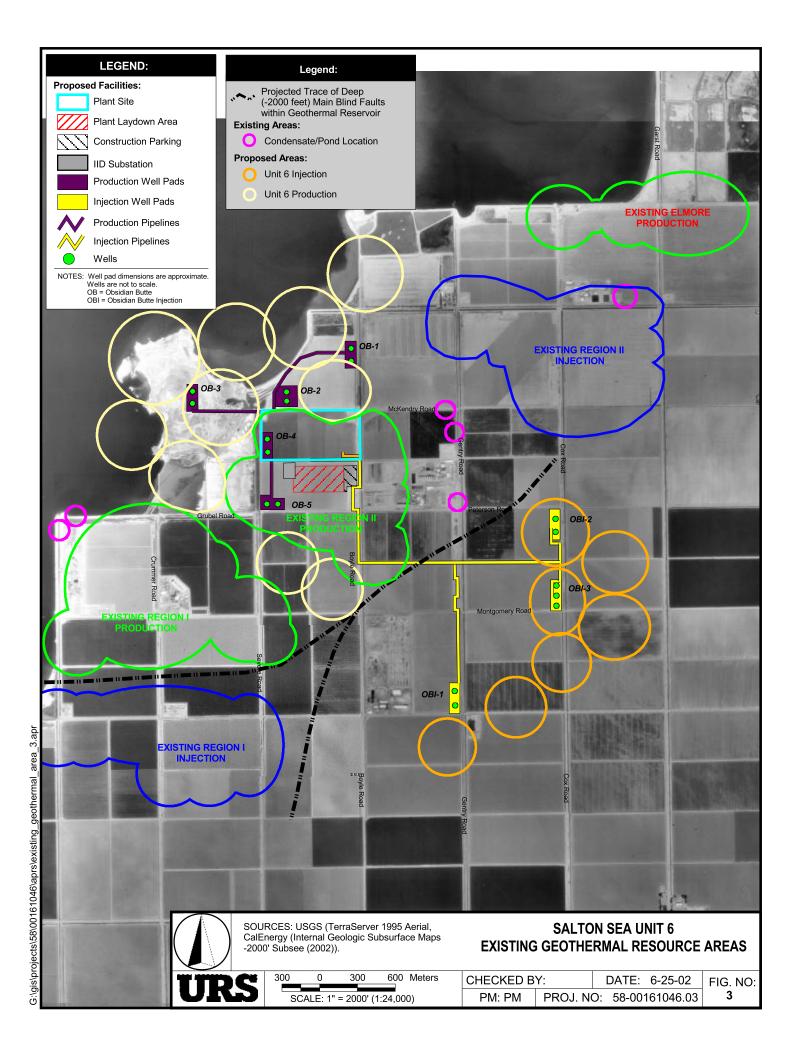
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# ROUTINE WETLAND DETERMINATION (1987 COE Wetlands Delineation Manual)

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Percent of Dominant Species tha	t are OBL, FAC	CW, or FAC (6	excluding FAC-)			· <u></u>
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HO-50 % Pumice in	p,T					
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HYDROLOGY				<u>.</u>		
			WET	LAND HYDROLOG	SY INDICATO	RS
Recorded Data (Describe			Primary Ind	Primary Indicators:		
Stream, Lake, or Tid	e Gauge			Inundated		•
Aerial Photographs				Saturated in Upper	r 12 Inches	
Other				Water Marks		
				Drift Lines Sediment Deposits		
No Recorded Data Available			┥	Drainage Patterns		
FIELD OBSER	VATIONS		_	Drainage r atterns	III W CUEITOS	
- 10 f - 18 der	iC/n	(ir	Secondary	Indicators (2 or mo	re Required):	
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		 (ir	,  <u> </u>	Water-Stained Lea		
Depth to Free Water in Pit	N/A	<u> </u>	·   '-	Local Soil Survey	Data	
	1.,	·		FAC-Neutral Test	5 d - S	
Depth to Saturated Soil	N/A	(ir	7] 니	Other (Explain in I	kemarks)	

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axonomy (Subgro	oup)		Field Observations	Confirm Mapped Type	e? (YES) NO
		PROFI	LE DESCRIPTION		
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		HYDRIC	SOIL INDICATORS:		-
☐ Histosol			☐ Concret	ions	
Histic Epipe	edon		High Org	ganic Content in Surfa	ce Layer in Sandy Soils
Sulfidic Odd	or		Organic	Streaking in Sandy So	pils
Aquic Moist	ture Regime		Listed or	n Local Hydric Soils Lis	st
Reducing C	Conditions		Listed or	n National Hydric Soils	List
Gleyed or L	ow-Chroma Colo	rs	Other (E	xplain in Remarks)	** **
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	RMINATION				
Irophytic Vegetat	· · · · · · · · · · · · · · · · · · ·	(FES) NO			
tland Hydrology F		YES (O)	i is this Sampling Po	oint Within a Wetland?	YES (NO)
Iric Soils Present		YES (NO)	<del></del>		
narks					
0% - 50% 7	Promitive IN 5	oiL.			
176- 2010 1					

# ROUTINE WETLAND DETERMINATION (1987 COE Wetlands Delineation Manual)

Project/Site SALTON SEA 6 / OBI Well?	Pad.	Date (1/20/01
Applicant / Owner CAL ENGREY / MIDAMERICA.		County IMPECIFIC
Investigator P. RICHARDS H. GREEN		State CA
Do Normal Circumstances exist on the site?	YES (NO)	Community ID
Is the site significantly disturbed (Atypical Situation)?	YES NO	Transect ID
is the area a potential Problem Area? (If needed, explain on reverse)	YES NO	Plot ID TEST PIT 2

<b>VE</b>	G	F٦	٦Δ	ΥI	O	N	ı

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 DIRIPLEX CANESCENS	5	FACU,	9		
1 ATRIPLEX CANESCENS 2 TAMPRIX RAMOS.	.5	FACW	10		
3 MAZVACAE - MANUELA LERUS	H	FAC+	11		
4			12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 67%

Remarks

# HYDROLOGY

Recorded Data (Describe in Remarks)  Stream, Lake, or Tide Gauge  Aerial Photographs			WETLAND HYDROLOGY INDICATORS Primary Indicators: Inundated Saturated in Upper 12 Inches
Other  No Recorded Data Available			☐ Water Marks — ITALIGATION DITCH FROM AG. LAND. ☐ Drift Lines ☐ Sediment Deposits
FIELD OBSERVATIONS			☐ Drainage Patterns in Wetlands
Depth of Surface Water	n/n	(in)	Secondary Indicators (2 or more Required):  Oxidized Root Channels in Upper 12 Inches
Depth to Free Water in Pit	A/لہ	(in)	☐ Water-Stained Leaves ☐ Local Soil Survey Data
Depth to Saturated Soil	H/A	(in)	☐ Other (Explain in Remarks)

DILS							
lap Unit Name (Se	eries and Phase	): Holtville Sicty	1 CLAY, WET	Drainage Class:			
axonomy (Subgro				Confirm Mapped Type	? (YES) NO		
		PROF	ILE DESCRIPTION				
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contras	Texture, Concretions  Structure, etc.		
0-16	A	7.5 VR 4/3	NA	N/A	SILTY CLAY		
	·						
		HYDRIC	SOIL INDICATORS:				
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Sulfidic Odd	or		_	Streaking in Sandy So			
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☐ Gleyed or Le	ow-Chroma Colo	irs	LJ Other (Explain in Remarks)				
AREA APPE DURT WAS	). FRESH WA	TER MARSH W	TYPHA ON OTH	L BETWEEN AG.	D.		
TLAND DETE	RMINATION						
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etland Hydrology F	resent?	YES NO	Is this Sampling Po	oint Within a Wetland?	YES (NO)		
dric Soils Present	?	YES (NO					
marks							
					ر المهران المعالم المع		
			:*				



**Photo 1:** View looking east from the middle of levee on McKendry Road. The proposed pipeline and road widening will occur south of this road past the far right edge of this photograph. Open water, tamarisk scrub, and brackish water marsh are visible along the northern edge of the road.



**Photo 2:** View looking east from the levee on McKendry Road.



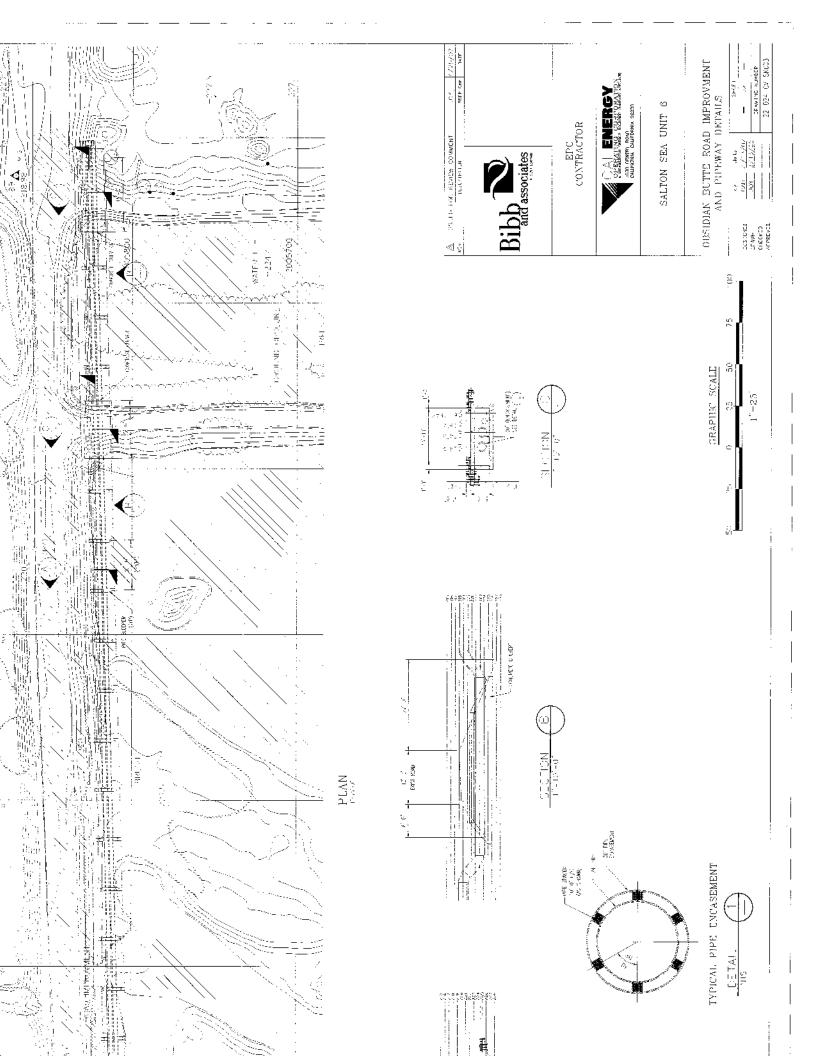
**Photo 3:** View looking east from the levee on McKendry Road. This side of the road will be widened to facilitate the proposed aboveground pipeline route. Open water, brackish water marsh, and desert saltbush scrub are visible in this photograph.



**Photo 4:** View looking east from levee on McKendry Road. Brackish water marsh associated with an earthen bottom irrigation ditch is visible to the south. Clapper rail was seen crossing this levee from an area at the north side of the levee to the brackish water marsh shown in this photograph.



Photo 5: View looking northeast from the levee on McKendry Road. Shovel indicates where Test Pit 1 was dug.



### REPORT

BIOLOGICAL ASSESSMENT FOR THE SALTON SEA UNIT 6 GEOTHERMAL POWER PLANT PROJECT

PREPARED FOR:

CE OBSIDIAN ENERGY LLC

URS PROJECT No. 58-00161046.03 00800

JULY 11, 2002

### REPORT

# BIOLOGICAL ASSESSMENT FOR THE SALTON SEA UNIT 6 PROJECT

# Prepared for:

CE Obsidian Energy LLC 7030 Gentry Road Calipatria, CA 92233

URS Project No. 58-00161046.03 00800

July 11, 2002

# **URS**

1615 Murray Canyon Road, Suite 1000 San Diego, CA 92108-4314 619-294-9400 Fax: 619-293-7920

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Appendix A Flyover and Abundance Survey Results

This Biological Assessment has been prepared in support of the proposed Salton Sea Unit 6 Project (SSU6) to be sited within the Imperial Valley approximately 1,000 feet southeast of the Salton Sea. The project as proposed includes road widening and construction of a pipeline that may affect waters of the United States subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act.

This Biological Assessment evaluates potential effects on the brown pelican (Federally Endangered/State Endangered), Yuma clapper rail (Federally Endangered/State Threatened), mountain plover (Federally Proposed Threatened/State Species of Special Concern), Least Bell's vireo (Federally Endangered/State Endangered), southwestern willow flycatcher (Federally Endangered/State Endangered) and desert puplish (Federally Endangered/State Endangered) from the proposed SSU6 Project. This document has been prepared to meet the requirements for consultation between the Corps and the U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7 of the Federal Endangered Species Act, and the requirements of Sections 2080, 2080.1 and 2081 of the California Endangered Species Act.

The proposed project would be permitted under the jurisdiction of the California Energy Commission (CEC) through an Application for Certification (AFC). The CEC permit process is a "one stop shop." It provides for granting of permits and approvals for thermal power plants greater than 50 megawatts (MW) that would normally be granted through individual State and local agencies. The CEC permitting process, however, does require coordination with these State and local agencies to ensure that appropriate issues are addressed.

Section 2 describes the project and its components. Section 3 provides a general description of the project study area and the biological resources therein. Sections 4 to 14 evaluate potential project impacts related to the above-mentioned species. Section 15 provides a summary of cumulative effects on the listed species. Section 16 provides recommendations to avoid, minimize, and/or compensate for project impacts and to conserve each species. Section 17 lists preparers and reviewers of this document. Section 18 lists references used in preparing this document.

This document primarily relies on material presented in the AFC, which includes detailed descriptions of affected resources and potential effects of the project. Both the CEC and the Corps require preparation of a Biological Resources Mitigation and Implementation Monitoring Plan (BRMIMP) report, which is in process. The BRMIMP is a detailed guidance document for all biological mitigation. This Biological Assessment describes mitigation measures that are also described in the AFC, and that also will be included in the BRMIMP.

Introduction

#### 2.1 OVERVIEW

The SSU6 project is a proposed geothermal power plant. It consists of the SSU6 geothermal plant site that would incorporate a turbine generator area, resource production facility, separation/brine clarification area, electrical/control building area, cooling towers, filter press and storage area, electrical switchyard, brine pond, water pond and power generation facility rain water run off basin, emission control equipment, parking area, and a construction lay-down area. In addition, 10 production wells on five well pads, seven injection wells on three well pads, and two small plant injection wells on existing well pads would be located on or near the plant site, with pipelines connecting them to the plant. A 500-foot long water supply pipeline would connect the plant with an existing water supply canal, Vail 4a, pass under Boyle Road and run along the southern boundary of the plant site. A 16-mile transmission line built at 230 kV, but operated at 161 kV (L-Line Interconnection), would be constructed to connect to the existing L Line southwest of the plant site. Additionally, a 15-mile transmission line (IID Midway Interconnection) built at 230 kV, but operated at 161 kV, would be constructed to connect the plant site to the existing Imperial Irrigation District (IID) Midway Substation, located east of the plant site. The study area includes each of these facilities plus the area within one mile of the plant site and the areas within 1,000 feet of the linear facilities. Evaluation of these study areas included the use of existing databases and direct field surveys to ensure an accurate assessment of potential impacts on biological resources as discussed below.

This area has been extensively reviewed from an environmental perspective for exploration and production projects under the Master Environmental Impact Report for the Salton Sea Anomaly (Westec Services, 1981). In the past, several wells were drilled and tested in the immediate area and have been either abandoned under California Division of Oil, Gas, and Geothermal Resources (DOGGR) guidelines and procedures, or function as monitoring wells. The proposed power plant site and associated well pad sites and transmission lines have been located and will be operated to minimize environmental impacts to the surrounding area.

# 2.2 PLANT SITE

The SSU6 power plant site is within the Imperial Valley, approximately 1,000 feet southeast of the Salton Sea (Figure 1). The Imperial Valley is located in the southwest part of the Colorado Desert that merges northwestward into the Coachella Valley near the northern shore of the Salton Sea. The SSU6 Project site is located in a region of the Imperial Valley that is characterized by wildlife habitat, agriculture, and geothermal power production. The surrounding area is dominated by agriculture.

The town of Niland is located approximately 7.5 miles to the northeast and the town of Calipatria is approximately 6.1 miles to the southeast of the plant site. The Sonny Bono Salton Sea National Wildlife Refuge (Refuge) Headquarters is located approximately 2,500 feet from the plant site. The Alamo River is located approximately three miles east of the plant site. Nine geothermal power plants are located within three miles of the plant site. Geothermal power plants commonly known as Salton Sea Units 1, 2, 3, 4 and 5 (Region 1) lie to the southwest, while geothermal power plants commonly known as Vulcan and Hoch (Region 2) lie to the southeast. Geothermal power plants commonly known as J.J. Elmore and Leathers are located to

the northeast. Vehicle access is either from State Highway 86 and Bannister Rd., or Sinclair Rd (from Highway 111.) Elevation is approximately 228 feet below sea level.

The plant would utilize 80 acres of a 160-acre parcel and will be located along the northern half of the block bounded by McKendry Road to the north, Severe Road to the west, Peterson Road to the south, and Boyle Road to the east. The grading footprint of the facility will be approximately 1,320 feet by 2,640 feet. Agriculture, agricultural ditches supporting patches of disturbed desert sink scrub, and gravel roads surround this location. Approximately 1,000 feet to the west is an open water/riparian scrub area that connects to the Salton Sea by a series of channels. Two intersecting, 20-foot-high gravel roads (berms) and Drainage Vail No. 5 separate this inundated area from the proposed plant site.

#### 2.3 TRANSMISSION LINES

#### L-Line Interconnection

The proposed interconnection of the facility to IID's existing transmission system is via a new substation south of McKendry Road and east of Severe Road. A 16-mile, double-circuit transmission line constructed at 230 kV, but operated at 161 kV, would be built to the south to connect the new substation to the existing El Centro and Avenue 58 substations via the existing L-Line. This proposed L-Line Interconnection route would connect to the L Line southwest of State Highway 86 and Bannister Road, and would cross U.S. Bureau of Land Management (BLM) land for approximately 2.8 miles (Figure 2).

# IID Midway Interconnection

A 15-mile, single-circuit transmission line constructed at 230 kV, but operated at 161 kV, also would be constructed from the new substation east to the existing IID Midway 230 kV substation. The 230 kV Midway substation would have a 161 kV line termination, a 161 kV breaker and a 161/230 kV transformer installed for the connection of the 161 kV line (Figure 2).

#### Alternate L-Line Interconnection

The Alternate L Line Interconnection would travel south from the plant site for nearly 7.5 miles, primarily along Lack Road to Bannister Road. Upon reaching Bannister Road, the route would travel west along Bannister Road to State Highway 86. From State Highway 86 this alternate route would parallel State Highway 86 on the east side of the highway until both intersect with the existing L-Line (Figure 2).

#### 2.4 WELL PADS

## **Production Wells**

Ten production wells are proposed on five new well pads, with two wells on each pad (Figure 3). The proposed location of Production Well Pad OB1 is in an agriculture field in the northeastern part of the northwest quarter of Section 33, with a grading footprint of approximately 300 feet by

700 feet. This location is adjacent to a freshwater marsh that supports Yuma clapper rail. This freshwater marsh was created by the Refuge and is considered a jurisdictional wetland by the Corps and the California Department of Fish and Game (CDFG). An access road that is approximately four feet higher than the adjacent agricultural field is at the south end of this marsh and is located between the marsh and the proposed location of the well pad.

The proposed location of Production Well Pad OB2 and associated 560-foot by 560-foot grading footprint is immediately north of McKendry Road, southwest of Production Well Pad OB1 (Figure 3). The proposed well pad location is occasionally used as an overflow parking lot during Refuge-sponsored events, and supports disturbed habitat with some desert sink scrub located on the west side of the site. A 20-foot levee separates this proposed site from a freshwater marsh.

The proposed location of Production Well Pad OB3 and associated 300-foot by 700-foot grading footprint is on the south side of Obsidian Butte in the eastern half of Section 32 (Figure 3). The IID actively mines this area for rocks used as riprap to line the roads adjacent to the Salton Sea. The well pad will be located on a level portion of Obsidian Butte in an area previously disturbed by the IID. Desert sink scrub consisting of iodine bush (*Allenrolfea occidentalis*) and desert holly (*Atriplex hymenelytra*) surrounds the study area outside the limits of grading of the proposed well pad site.

Construction of a pipeline between Production Well Pad OB3 and the power plant site would affect wetlands over which the Corps has jurisdiction pursuant to Section 404 of the Clean Water Act. Placing Production Well Pad OB3 on Obsidian Butte requires widening the access road to Obsidian Butte in order to accommodate the transportation of drill rigs to the well pad, and construction of a pipeline connecting wells on OB3 to the plant.

The existing roadway between the west end of McKendry Road and Obsidian Butte is used to provide service to a gravel pit located on Obsidian Butte. The road width is approximately 10 feet, and varies along its length. In order to provide a route for the drilling rigs that would be required to construct the two production wells located on Obsidian Butte, the road would be widened by approximately 15 feet, providing a 25-foot wide road surface. The widening would occur along the south side of the existing road with standard civil construction equipment, including dump trucks, bulldozers, compacting machines and grading machines.

Installation of the pipeline would require installation of approximately 20 pipe supports along a 600-foot distance (one support every 30 feet) on the south side of the widened road. The pipe supports are anticipated to be 12 feet wide and constructed of steel. Each support would be elevated above grade, supported by two piles, each approximately 14 inches in diameter. One of each pair of piles would be driven along the road slope and the other driven directly in the water. Construction of the pipeline would require cranes, a pile driving machine, fork lifts, welding machines and small trucks.

The proposed location of Production Well Pad OB4 and associated 300-foot by 700-foot grading footprint (Figure 3) is in the southwest corner of the proposed power plant site. This location is surrounded by agriculture, agricultural ditches supporting patches of disturbed riparian scrub and paved and gravel roads.

The proposed location of Production Well Pad OB5 and associated 300-foot by 700- foot grading footprint (Figure 3) is in the southwestern corner of the same agriculture field as Well Pad OB4 and the plant site, immediately north of Peterson Road. This location is surrounded by agriculture, agricultural ditches supporting patches of disturbed riparian scrub, and paved and gravel roads.

## Injection Wells

In addition to the production wells, seven new injection wells on three new well pads are proposed. Injection Well Pads OBI-1 and OBI-2 would consist of two wells, and Injection Well Pad OBI-3 will consist of three wells (Figure 3).

The proposed location of Injection Well Pad OBI-1 and associated 300-foot by 700-foot grading footprint is on the west side of Gentry Road and north side of Lindsey Road in the southeast quarter of Section 4 (Figure 3). The habitat at and around the site is agricultural.

The proposed location of Injection Well Pad OBI-2 and associated 300-foot by 700- foot grading footprint (Figure 3) is on the west side of Cox Road and south of Peterson Road. The habitat at the site is agricultural. This well pad is located south of the main injection areas of the Elmore, Vulcan, and Hoch geothermal power plants.

The proposed location of Injection Well Pad OBI-3 is on the west side of Cox Road and south side of Montgomery Road, directly south of Injection Well Pad OBI-2 in an agricultural field. The proposed grading footprint of this well pad is 300-feet by 700-feet (Figure 3).

#### 2.5 PIPELINES

#### **Production & Injection Pipelines**

The 100-foot wide pipeline corridors (plus an additional 10% for expansion joints) between the well-pad sites and the power plant site will be built on and/or traverse primarily agricultural land, drainage channels and paved or gravel roads (Figure 4). The pipeline corridor for Production Well Pad OB3 on Obsidian Butte would cross a brackish water marsh and would impact disturbed tamarisk and open water that is considered waters of the United States. The other agricultural drainage channels that will be spanned by the pipelines associated with the injection wells are vegetated with cattails (*Typha* spp.) and common reed (*Phragmites australis*) but are not considered waters of the United States because these agricultural drainages are a part of the IID water conveyance system built within a upland location, and are artificially derived and maintained by IID for agricultural production. The drainage function at these locations will not be affected by the pipeline crossings.

Construction of a pipeline between Production Well Pad OB3 and the power plant site would affect wetlands over which the Corps has jurisdiction pursuant to Section 404 of the Clean Water Act. Placing Production Well Pad OB3 on Obsidian Butte would require widening of the access road to Obsidian Butte in order to accommodate the transportation of drill rigs to the well pad, and construction of a pipeline connecting wells on OB3 to the plant. The pipeline supports and footings would be placed on the south side of the widened road (Figures 3 and 4). Minor impacts to the marsh are expected to result from the creation of a series of piers that will support

the pipeline crossing of the marsh and the widening of the existing dirt road. (See discussion in section 2.4 above.)

# Water Supply Pipeline

A new water supply pipeline line will be built perpendicular to Boyle Road and would connect the plant site with the existing Vail 4A lateral (gates 459 and 460), located on the east side of Boyle Road (Figure 3). Disturbed/developed areas are present along the approximately 500-foot long section of pipeline starting at Boyle Road at the middle of the eastern boundary of the 160-acre parcel.

This section describes the environmental baseline against which the overall effects of the action (i.e., the project) are evaluated. Specific, more detailed aspects of the environmental baseline that apply to each of the listed species evaluated in this Biological Assessment are further developed for each respective species in Sections 4 through 14.

The study area includes each of the project facilities, as described in Section 2.1, plus the area within one mile of the plant site and the areas within 1,000 feet of the linear facilities.

Most of the existing land use within the SSU6 Project study area is active agriculture, with scattered disturbed areas, two fresh water marshes dominated by cattails (*Typha* sp.) in the area nearest the Refuge and Obsidian Butte, riparian habitat dominated by tamarisk that is restricted to the New River crossing on Lack Road, chenopod scrub, and desert scrub. The cattail marshes in the area nearest the Refuge and Obsidian Butte and the Salton Sea are considered waters of the United States.

#### 3.1 PLANT COMMUNITIES

There are four native vegetation communities and three nonnative communities within the project area. In addition, the study area includes developed lands that do not support habitat for native plant or animal species. Native vegetation communities include creosote bush scrub, desert sink scrub, freshwater marsh, and disturbed riparian scrub. The classification of vegetation used in this study is based on the Holland system (Holland, 1986).

The majority of the plant compositions in the study area are not climax plant communities; therefore, many of the names for the mapped vegetation units are not consistent in species composition with the published descriptions. Most of the plant communities encountered by the project had vegetation cover dominated by senescent or active exotic grasses and weeds. This vegetation element is omnipresent in the project area growing under, co-dominant with, or replacing the native cover species.

Where the Holland classification was ambiguous, the most prominent or regularly distributed native species were used to classify the mapped vegetation into the best-fitting Holland type. This method was chosen to recognize plant compositions with regularly occurring and recovering native cover species.

# 3.1.1 General Habitat Descriptions

Creosote Bush Scrub communities typically consist of widely spaced individuals of creosote bush (*Larrea tridentata*), brittlebush (*Ambrosia dumosa*), saltbushes (*Atriplex* spp.) and associated cacti (*Opuntia* spp.) with a sparse annual herbaceous layer. The creosote bush scrub within the project area consists of a very low cover of shrubs and herbaceous plants compared to many crossote bush scrub areas throughout the Mojave and Sonoran Deserts. Evidence of disturbance is obvious in some areas and the soil salinity is likely very high from the heavy salt loads that are carried and deposited by the Colorado River. These factors probably contribute to the low plant cover and diversity.

**Desert Sink Scrub** communities typically consist of widely spaced plants on poorly drained, high alkalinity soils. The desert sink scrub in the study area consists of iodine bush (*Allenrolfea* 

*virginica*), sea-blite (*Suaeda moquinii*), and desert holly (*Atriplex hymenelytra*). This habitat is present near the limits of grading of proposed Production Well Pads OB2 and OB3 and within the alignment of the pipeline between Production Well Pad OB1 and the plant site.

**Freshwater Marsh** communities are typically dominated by cattails (*Typha* spp.) and/or other emergent vegetation (*Scirpus* spp., *Carex* spp.). The two freshwater marshes within the project area are dominated by cattails (*Typha latifolia*) and common reed (*Phragmites australis*).

**Disturbed Riparian Scrub** communities vary from a dense, broad-leafed, winter-deciduous association dominated by several species such as willow (Salix spp.) and mulefat (Baccharis salicifolia) to a monotypic scrub dominated by salt cedar (also known as tamarisk: Tamarix spp.). The disturbed riparian scrub in the project vicinity occurs in patches along many of the agricultural drainages that convey water from the Alamo and New Rivers along the road network to the fields. The composition and density of the disturbed riparian scrub differs slightly in the ditches, but typically consists of tamarisk, arrowweed (Pluchea sericea), common reed (Phragmites australis), and saltgrass (Distichlis spicata). The project area also supports small patches of monotypic scrub communities of tamarisk, arrowweed, and common reed.

**Agricultural** areas dominate the study area. The Imperial Valley is one of the most productive agricultural regions in the world. The active agricultural lands within the study area support row crops such as alfalfa, lettuce, carrots, sugar beets, broccoli, and numerous others. Several fields within the study area support cattle, have been recently disked for immediate planting, or are fallow. The fallow lands will most likely be cultivated again and will not succeed to a disturbed community such as non-native grassland.

**Disturbed Habitat** is any land on which the native vegetation has been significantly altered by agriculture, construction, or other land-clearing activities, and the species composition and site conditions are not characteristic of the disturbed phase of one of the plant associations within the study region. Such habitat is dominated by nonnative annual and perennial broad-leaved species. The disturbed habitat within the study area can be found along roads and areas that have been cleared, but are not under cultivation.

**Developed** land supports no native vegetation and often contains man-made structures such as buildings or roads. These areas include industrial and commercial buildings as well as residences. Recently cleared and graded areas that are associated with development are also included in this category.

#### 3.1.2 Plant Site

The 80-acre area required to accommodate the plant facilities is located along the northern portion of the block bounded by McKendry Road to the north, Severe Road to the west, Peterson Road to the south, and Boyle Road to the east. The grading footprint for the plant facilities would be approximately 1,320 feet by 2,640 feet. Agriculture, agricultural ditches supporting patches of disturbed riparian scrub, and gravel roads surround this location, and approximately 1,000 feet to the west is an open water/riparian scrub area with freshwater marsh that connects to the Salton Sea by a series of channels. Two intersecting, 20-foot-high gravel roads (berms) separate this area from the proposed plant site. There were no sensitive plant species identified

on or near the site. The on-going cultivation of the agricultural fields and use of the access roads precludes the development of habitat suitable to support sensitive plant species.

#### 3.1.3 Transmission Lines

#### L-Line Interconnection

The habitat along Lack and Bannister Roads consists of agriculture and associated canals, developed-residential, and a strip of riparian habitat dominated by tamarisk (*Tamarix* sp.) where the New River crosses Lack Road. Agricultural drainage channels follow Lack and Bannister Roads and consist of disturbed, ruderal vegetation, such as mustard (*Brassica tournefortii*), sow thistle (*Sonchus oleraceus*), alkali mallow (*Malvella leprosa*), and alkali weed (*Cressa truxillensis*). Typical vegetation communities are present in the channels, some of which are concrete-lined. The habitat west of the junction of Bannister Road and State Highway 86 (on BLM Land) is creosote bush scrub consisting of creosote bush, brittlebush, saltbush, and ephedra (*Ephedra viridis*).

# IID Midway Interconnection

An approximately 15-mile, single-circuit transmission line, built at 230 kV but operated at 161 kV, also would be constructed from the new substation east to the existing Midway 230 kV substation. The 230 kV Midway substation would have a 161 kV line termination, a 161 kV breaker and a 161/230 kV transformer installed for the connection of the 161 kV line (Figure 2).

#### Alternate L-Line Interconnection

The Alternate L-Line Interconnection would travel south from the plant site for nearly 7.5 miles primarily along Lack Road to Bannister Road, as does the proposed L-Line Interconnection. Upon reaching Bannister Road, the route would travel west along Bannister Road to State Highway 86. From State Highway 86, this alternate route would parallel State Highway 86 until both intersect with the existing L-Line (Figure 2).

#### 3.1.4 Well Pads

#### **Production Wells**

Ten production wells are proposed on five new well pads, with two wells on each pad. The proposed location of Production Well Pad OB1 is in an agricultural field in the northeastern part of the northwest quarter of Section 33, with a grading footprint of 300-feet by 700-feet. This location is adjacent to a freshwater marsh that supports Yuma clapper rail. Adjacent freshwater marsh was created by the Refuge and is considered a jurisdictional wetland by the Corps and CDFG. An access road that is approximately four feet higher than the adjacent agricultural field is at the south end of this marsh and is located between the marsh and the proposed location of the well pad.

The proposed location of Production Well Pad OB2 and associated 560-foot by 560-foot grading footprint is immediately north of McKendry Road, southwest of Production Well Pad OB1. The

proposed well pad location is occasionally used as an overflow parking lot during Refuge-sponsored events, and supports disturbed habitat with some desert sink scrub located on the west side of the site. A 20-foot levee separates this proposed site from a freshwater marsh.

The proposed location of Production Well Pad OB3 and associated 300-foot by 700-foot grading footprint is on the south side of Obsidian Butte in the eastern half of Section 32. The IID actively mines this area for rocks used as riprap to line the roads adjacent to the Salton Sea. The well pad will be located on a level portion of Obsidian Butte in the area previously disturbed by the IID. Desert sink scrub consisting of iodine bush (*Allenrolfea occidentalis*) and desert holly (*Atriplex hymenelytra*) surrounds the study area outside the limits of grading of the proposed well-pad site.

The proposed location of Production Well Pad OB4 and associated 300-foot by 700-foot grading footprint is in the southwest corner of the proposed power plant site. This location is surrounded by agriculture, agricultural ditches supporting patches of disturbed riparian scrub and paved and gravel roads.

The proposed location of Production Well Pad OB5 and associated 300-foot by 700-foot grading footprint is in the southeastern corner of the same agriculture field as Production Well Pad OB4 and the plant site, immediately north of Peterson Road. This location is surrounded by agricultural, agricultural ditches supporting patches of disturbed riparian scrub, and paved and gravel roads.

# Injection Wells

In addition to the production wells, seven new injection wells on three new well pads are proposed. Injection Well Pads OBI-1 and OBI-2 each consists of two wells, and Injection Well Pad OBI-3 consists of three wells.

The proposed location of Injection Well Pad OBI-1 and associated 300-foot by 700-foot grading footprint is on the west side of Gentry Road and north side of Lindsey Road in the southeast quarter of Section 4. The habitat at and around the site is agricultural.

The proposed location of Injection Well Pad OBI-2 and associated 300-foot by 700-foot grading footprint is on the west side of Cox Road and south of Peterson Road. The habitat at the site is agricultural. This well pad is located south of the main injection areas of the Elmore, Vulcan, and Hoch geothermal power plants.

The proposed location of Injection Well Pad OBI-3 is on the west side of Cox Road and south side of Montgomery Road, directly south of Well Pad OBI-2 in an agricultural field. The proposed grading footprint of this well pad is 300 feet by 700 feet.

# 3.1.5 Pipelines

# **Production & Injection Pipelines**

The 320-foot wide pipeline corridors between the well-pad sites and the power-plant site traverse primarily agricultural land, drainage channels and paved or gravel roads. The pipeline corridor for Production Well Pad OB3 on Obsidian Butte would cross a brackish water marsh and would

impact disturbed tamarisk scrub and open water that is considered waters of the United States. Minor impacts to the inundated area are expected to result from the creation of a series of pier footings placed at 20-foot intervals that will support the pipeline crossing adjacent to the access road to Obsidian Butte and the widening of the existing road to a width of 25 feet. The other agricultural drainage channels that will be spanned by the pipelines associated with the injection wells are sparsely vegetated with cattails (*Typha* spp.) and common reed (*Phragmites australis*). The agricultural drainages are not considered waters of the United States because these agricultural drainages are a part of the IID water conveyance system built within an upland location, and are artificially derived and maintained by IID for agricultural production. The drainage function at these locations will not be affected by the pipeline crossings.

## Water Supply Pipeline

A new water supply pipeline line will be built perpendicular to Boyle Road, and would connect the plant site with the existing Vail 4A lateral (gates 459 and 460), located on the east side of Boyle Road. Developed areas are present along the approximately 500-foot long section of pipeline.

#### 3.2 WILDLIFE

The major habitat types in the study area are associated with the Imperial Valley and the Salton Sca. The Imperial Valley includes natural habitat areas typical of the low Colorado Desert including creosote bush scrub and desert sink scrub. These habitats extend across portions of the Imperial Valley, which also has substantial agricultural development. At the nadir of the Imperial Valley lies the Salton Sea, an artificially created body of Colorado River-derived water fed by irrigation canals and artificial streams such as the New and Alamo Rivers. The elevation at the Salton Sea surface is 226 feet below sea level. Occupying the lakebed of ancient Lake Cahuilla, the highly-alkaline Salton Sea was created in 1905 when a diversion structure on the Colorado River failed, and the river flowed into the Salton Sink for 16 months (USFWS, 1997). The Salton Sea now functions as a migratory stopover for an abundance of bird life. In recognition of this, the Refuge was established in 1930, and covers 37,600 acres of mostly inundated area.

Burrowing owls are common throughout the study area in drainage ditches and on posts along the roadsides, mostly outside the immediate well-pad locations. Yuma clapper rails were detected in the cattail marshes located within the study area but outside the area of direct impact from the well pads or power plant facilities. A complete listing of sensitive species with the potential to occur in the study area can be found in Table 1.

#### 3.2.1 Plant Site

The plant facilities will be located on 80 acres in the northern portion of the block bounded by McKendry Road to the north, Severe Road to the west, Peterson Road to the south, and Boyle Road to the cast. The entire block (approximately 2,500 feet by 2,500 feet) was evaluated for potential impacts to sensitive species. The grading footprint of the facilities would be approximately 1,320 by 2,640 feet. Agriculture and gravel roads surround this location, and

approximately 1,000 feet to the west is a marsh/pond that connects to the Salton Sea by a series of channels. Two intersecting, 20-foot-high gravel roads (berms) separate this marsh from the proposed plant site facilities.

In 1991, 44 desert pupfish were recorded in a shoreline pool located near the northwest corner of the plant facilities site. This pool is fed by the agricultural Vail Drain and Lateral 5, a portion of which runs along the western boundary of the plant site. Subsequent pupfish surveys of this area (1998 to present) have been negative. One burrowing owl was detected on the east side of the quarter section along Boyle Road, and another was detected within the proposed power plant facilities site near McKendry Road.

#### 3.2.2 Transmission Lines

#### L-Line Interconnection

The 2.8-mile corridor between State Highway 86 and the L-Line Interconnection currently is owned by the BLM and consists primarily of creosote bush scrub, with areas of disturbed habitat near the highway. A large wash flows along the majority of the route and appears to be used by carnivores, as manifested by the evidence of tracks, scat, and den sites. Signs of coyote (*Canis latrans*), bobcat (*Felis rufus*), and kit fox (*Vulpes macrotis*) were detected in association with this wash during a February 6, 2002, biological survey of this route.

The habitat along the proposed route is disturbed at various points. Evidence of off-highway vehicles is present throughout this route, especially near the highway and in the bottom of the larger washes in this area. Adjacent and to the south of the route is an active landfill that incorporates most of Section 16. A fence line encircling the landfill area prevents further disturbance beyond the landfill property. The transmission line route also would cross a large bank-reinforcing berm that presumably prevents a large wash from encroaching upon the landfill property. This berm is approximately a half-mile in length, approximately 30 feet wide, and appears to be maintained annually.

#### IID Midway Interconnection

The IID Midway Interconnection would follow a route that ends at the Midway substation approximately 15 miles east of the project site. Agricultural and developed habitat exist along the entire route, but provide marginal value to native wildlife because of the lack of native vegetation. However, burrowing owls were observed along the IID Midway Interconnection alignment (Figures 4 through 8). Burrowing owl occupy burrows along the various roadside ditches and canals that flow adjacent to the agricultural fields.

#### Alternate L-Line Interconnection

The Alternate L-Line Interconnection would travel south from the plant site for nearly 7.5 miles primarily along Lack Road to Bannister Road, as does the Proposed L Line Interconnection route. Upon reaching Bannister Road, the route would travel west along Bannister Road to State Highway 86. From State Highway 86, the route would parallel State Highway 86 until both intersect with the existing L line. The habitat along Lack and Bannister Roads consists of

agriculture and associated canals, developed-residential, and a strip of riparian habitat dominated by tamarisk (*Tamarix* sp.) where the New River crosses Lack Road. Burrowing owls occupy the southern two to three miles of the drainage channels along Lack Road and the drainage channels along Bannister Road near its intersection with Lack Road.

#### 3.2.3 Well Pads

#### **Production Wells**

The proposed location of Production Well Pad OB1 and associated 300-foot by 700-foot grading footprint is adjacent to a freshwater marsh that supports Yuma clapper rail. This freshwater marsh was developed by the Refuge and is considered a jurisdictional wetland by the Corps and the CDFG. URS biologists detected three Yuma clapper rails in this marsh during surveys in the summer of 2001, and one Yuma clapper rail in an adjacent irrigation canal that is dominated by cattails in the spring of 2002.

The area Production Well Pad OB2 and associated 560-foot by 560-foot grading footprint would occupy is occasionally used as an overflow parking lot during Refuge-sponsored events. Two Yuma clapper rails were detected in the spring of 2001 in a disturbed wetland buffer area that exists between the 20-foot levee and the proposed Production Well Pad OB2 location. A burrowing owl was observed on several occasions in the southwest corner of this well pad site, however, no burrows were found within the proposed well pad site (Table 3).

The proposed location of Production Well Pad OB3 and associated 300-foot by 700-foot grading footprint is on the south side of Obsidian Butte in the eastern half of Section 32. Although gull-billed terms have historically nested on the north edge of Obsidian Butte, no confirmed nesting has been reported at this location for the last two years. The primary nesting site of gull-billed terms is located on Rock Hill, an island in the Salton Sea northeast of the proposed SSU6 Project study area (Molina 2000). Brown pelicans also have historically nested along the southern edge of Obsidian Butte. However, within recent years nesting has been unsuccessful (Bradshaw 2002). No burrowing owl or Yuma clapper rails were detected, and no suitable habitat for these species is present at this location on Obsidian Butte.

The proposed location of Production Well Pad OB4 and associated 300-foot by 700-foot grading footprint is in the southwest corner of the proposed power plant site. One burrowing owl was detected on the east side of the quarter section along Boyle Road. Clapper rail habitat is not present at this site.

The proposed location of Production Well Pad OB5 and associated 300-foot by 700-foot grading footprint is in the southeastern corner of the same agriculture field as Production Well Pad OB4 and the plant site immediately north of Peterson Road. This location is surrounded by agriculture and paved and gravel roads. Two burrowing owls were detected south of the well pad. Clapper rail habitat is not present at this site.

# Injection Wells

The proposed location of Injection Well Pad OBI-1 and associated 300-foot by 700-foot grading footprint is on the west side of Gentry Road and north side of Lindsey Road in the southeast

quarter of Section 4. A burrowing owl pair was detected on the side of a drainage channel approximately 200 feet west of the proposed well pad site along Lindsey Road. Three additional burrowing owls were observed along the east side of this well pad in 2002. Clapper rail habitat is not present at this site.

The proposed location of Injection Well Pad OBI-2 and associated 300-foot by 700-foot grading footprint is on the west side of Cox Road and south of Peterson Road. Two burrowing owls were detected just north of this proposed well pad site in February 2002. Clapper rail habitat is not present at this site.

The proposed location of Injection Well Pad OBI-3 and associated 300-foot by 700-foot grading footprint is on the west side of Cox Road and south side of Montgomery Road, directly south of Injection Well Pad OBI-2 in an agriculture field (Table 3). A burrowing owl was detected on the east side of this well pad. Clapper rail habitat is not present at this site.

## 3.2.4 Pipelines

# **Production & Injection Pipelines**

The 100-foot wide pipeline corridors (plus an additional 10% for expansion joints) between the well pad sites and the power plant site traverse primarily agricultural land, drainage channels and paved or gravel roads. The pipelines associated with Production Well Pads OB1 and OB2 would traverse IID-owned land for their entire length, approximately 4,600 feet and 700 feet, respectively. The pipeline corridor for Production Well OB3 on Obsidian Butte would cross a brackish marsh that is occupied by Yuma clapper rails. No desert pupfish were detected in this portion of the marsh during several recent surveys (Table 4). Minor impacts to the marsh and these species are expected to result from the installation of a series of piers that will support the pipeline crossing of the marsh. Some of the other agricultural drainage channels that will be crossed by the pipelines associated with the injection wells are vegetated with cattails and common reed and have the potential to support clapper rail. However, no clapper rails were detected in any of these channels during surveys. Burrowing owls were detected within 1,000 feet of these corridors.

# Water Supply Pipelines

No sensitive species were detected along the approximately 500-foot long corridor for the water supply pipeline (Table 3).

# 3.2.5 Avian Flyover Analysis

Ogden and URS conducted an avian flyover analysis to document the numbers and types of waterfowl and shorebirds that may be impacted by new facilities and transmission lines in the project area, and the potential shorebird flyways between the Salton Sea and the project area. URS biologists collected data from several biological surveys of the SSU6 Project study area during the fall/winter and spring/summer seasons of 1999-2002 and incorporated data collected from surveys done by Ogden in 1989 and 1994 into the data set of waterfowl abundance and flyovers. Surveys consisted of shoreline and transmission-line flyover surveys, as well as avian abundance surveys in the project area.

In 1994 Ogden developed the survey protocol for the avian flyovers with the assistance of the USFWS, and with the approval of the California Energy Commission staff. Starting at sunrise, approximately five predetermined stations within the project area were visited each survey day. Flyover surveys at each station lasted 30 minutes, during which the species, direction, and approximate height of all shorebirds and waterfowl flying over a specific area were recorded. When a determination of species was not possible, birds were grouped into categories (e.g., terns, gulls, ducks, etc.). Flight elevation was estimated and grouped into three elevation categories: low (<75 feet), medium (75-150 feet), and high (>150 feet). These elevation categories are based on existing and proposed electrical transmission lines, and are determined to reflect potential hazards to waterfowl and shorebirds. Existing electrical transmission lines in the study area are 40 to 60 feet above the ground, and new electrical transmission lines proposed for the project are expected to be 100 to 125 feet above the ground.

Data collection was restricted to waterfowl and shorebirds that were observed moving from resting areas to inland foraging areas or from foraging areas to resting areas, potentially placing them at risk from new facilities and transmission lines placed in the study area. Birds observed foraging along the shore, making short flights between the sea and immediately adjacent foraging habitat, traveling along the shoreline, or circling over the sea were recorded but not included in the data analysis as flyovers.

Following a flyover survey at a given station, URS biologists assessed the abundance of waterfowl and shorebirds and any sensitive species in the study area. A predetermined survey route that included all proposed well pads, the power plant site, and the transmission line, each with a 1,000-foot buffer zone, was traveled by vehicle, with periodic stops to sean and count for birds. Only birds that were present at the beginning of the count were recorded. Habitat-type and agricultural or other human activities were recorded, as well as the presence or absence of water in foraging areas. Weather conditions and time spent surveying at each station were also recorded. Field observations were made with binoculars and spotting scopes when necessary. Results of this analysis are for the elevations that are relevant to the SSU6 Project (75-150 feet) and are displayed in Figure 9. All survey data is available in Appendix A.

**SECTIONFOUR** 

### 4.1 REGIONAL DISTRIBUTION OF PEIRSON'S MILKVETCH AND LOCAL PLANS

## 4.1.1 Historic and Existing Known Distribution

Peirson's milkvetch (*Astragalus magdalenae* var. *peirsonii*) is a State-endangered and Federally threatened species that is rare but assumed stable in the southern deserts. It is a perennial herb in the pea family, reaching three feet in height. It occurs on desert dunes at elevations from 160-850 feet above sea level. The variety produces pink-purple flowers from December through April. The closest recorded occurrence of this species is in the vicinity of Kane Spring on the west side of the Salton Sea, approximately 13 miles west-southwest of the project area.

# 4.1.2 Regional and Local Plans

At this time, there is no approved habitat conservation plan for Imperial County. The Coachella Valley Natural Communities Conservation Planning (NCCP) program is in progress, but is not yet approved. The Refuge and the California Desert Conservation Area (CDCA) are located within Imperial County, but will not be adversely impacted by project activities.

### 4.2 OCCURRENCE AND STATUS OF THE SPECIES ON SITE

The Peirson's milkvetch has not been observed within the project area. There is little to no potential for this species to occur within the study area due to lack of suitable habitat or soils.

#### 4.3 EFFECTS OF THE PROJECT ON PEIRSON'S MILKVETCH

The proposed project will not adversely affect the Peirson's milkvetch. The project area does not support the preferred habitat, nor have any individuals been observed. Therefore, no adverse effects on the species are expected to result from the construction or operation of the proposed project.

SECTIONFIVE Desert Pupfish

#### 5.1 REGIONAL DISTRIBUTION OF DESERT PUPFISH AND LOCAL PLANS

# 5.1.1 Historic and Existing Known Distribution

The desert pupfish (*Cyprinodon macularius*) is a Federal and State-endangered small silvery-colored fish. It was historically distributed throughout the lower Colorado River, portions of Arizona, southeastern California, and northern Mexico. It prefers backwater areas, springs, streams, and pools along the shoreline of the Salton Sea. In California, the desert pupfish is restricted to shoreline pools of the Salton Sea, agricultural drains in the Imperial and Coachella valleys, lower Salt Creek in Riverside County, lower San Felipe Creek in Imperial County, and eight artificial Refuge ponds (Bolster 1990, CDFG 1991). This species is threatened by habitat alteration, reduced water quality, and the introduction of exotic species.

# 5.1.2 Regional and Local Plans

At this time, there is no approved habitat conservation plan for Imperial County. The Coachella Valley NCCP is in progress, but is not yet approved. The Refuge and the CDCA are located within Imperial County, but will not be adversely impacted by project activities.

#### 5.2 OCCURRENCE AND STATUS OF THE SPECIES ON SITE

The desert pupfish has not been observed within the project area, although there are several records of this species in slow-flowing agricultural drainages throughout the Salton Sea area. This species potentially exists within these drainages in the Obsidian Butte study area; however, the drainage that would be affected by project activities showed no sign of desert pupfish occurrence in the 1998, 2000 or 2002 surveys, although it could be appropriate habitat. Therefore, desert pupfish are not expected to be impacted by the proposed project. A survey performed by Dr. Allan A. Schoenherr on February 9, 2002, detected no desert pupfish within plots along the proposed pipeline route from the plant site to Production Well Pad OB3. In a 1994 survey, a total of 53 pupfish were captured south of McKendry Road (Table 4). However, desert pupfish were not detected in 2002 surveys of this area by Dr. Schoenherr (Table 4).

### 5.3 EFFECTS OF THE PROJECT ON DESERT PUPFISH

The proposed project will not adversely affect the desert pupfish. Although the species has the potential to occur in drainages throughout the site, only one drainage will be impacted by project activities and no desert pupfish were observed there in the 1998, 2000, or 2002 surveys. Therefore, no adverse effects on desert pupfish are expected to result from the construction or operation of the proposed project.

SECTIONS IX Least Bell's Vireo

#### 6.1 REGIONAL DISTRIBUTION OF LEAST BELL'S VIREO AND LOCAL PLANS

## 6.1.1 Historic and Existing Known Distribution

Historically this Federal and State-endangered subspecies (*Vireo bellii pusillus*) was a common summer visitor to riparian habitat throughout much of California. Currently, least Bell's vireo is found only in riparian woodlands in southern California, with the majority of breeding pairs in San Diego, Santa Barbara, and Riverside counties. The vireo's decline is due to loss and degradation of riparian habitat combined with nest parasitism by the brown-headed cowbird (*Molothrus ater*). Least Bell's vireo is restricted to riparian woodland and is most frequent in areas that combine an understory of dense young willows or mulefat with a canopy of tall willows.

# 6.1.2 Regional and Local Plans

At this time, there is no approved habitat conservation plan for Imperial County. The Coachella Valley NCCP is in progress, but is not yet approved. The Refuge and the CDCA are located within Imperial County, but will not be adversely impacted by project activities.

#### 6.2 OCCURRENCE AND STATUS OF THE SPECIES ON SITE

Suitable riparian habitat for this species is not present in the project area. The proposed L-Line Interconnection would cross over a section of tamarisk (*Tamarix* spp.) dominated riparian habitat associated with the New River and Alamo River, however, no least Bell's vireo have been recorded historically in this area or during recent field surveys.

#### 6.3 EFFECTS OF THE PROJECT ON LEAST BELL'S VIREO

The proposed project will not adversely affect the least Bell's vireo. The project site does not support the preferred habitat, nor have any individuals been observed. Therefore, no adverse effects on least Bell's vireo are expected to result from the construction or operation of the proposed project.

# 7.1 REGIONAL DISTRIBUTION OF CALIFORNIA BROWN PELICAN AND LOCAL PLANS

## 7.1.1 Historic and Existing Known Distribution

The California brown pelican (*Pelecanus occidentalis*) is a Federal and State-endangered species. It nests on the Gulf and Pacific coasts of Baja California (Wilbur 1987), moving northward after the breeding season. Coastal populations remain throughout the winter and early spring, but birds on the Salton Sea and lower Colorado River usually depart by late fall (McCaskie 1979). Arrivals at the Salton Sea typically begin in June, with peak numbers in July and August (McCaskie 1979, 1980, Garrett and Dunn 1981). The species has regularly occurred in the project area within the last 30 years and peak numbers have increased by a factor of 10 to 20 in the last 10 years (McCaskie 1989, 1990).

Brown pelicans began nesting at the Salton Sea in 1996 (Shuford et al. 1999). The number of breeding birds has been low, with six pairs nesting in 1996 and several pairs attempting to nest in most years since then (Shuford et al. 1999). Brown pelicans did not nest at the Salton Sea in 1999 (Shuford et al. 2000). Nesting birds have used tamarisks at the Alamo River delta and also attempted to nest at Obsidian Butte (S. Johnson, pers. comm.). Recent nesting attempts at Obsidian Butte, however, have been unsuccessful (Bradshaw 2002).

## 7.1.2 Regional and Local Plans

At this time, there is no approved habitat conservation plan for Imperial County. The Coachella Valley NCCP is in progress, but is not yet approved. The Refuge and the CDCA are located within Imperial County, but will not be adversely impacted by project activities.

#### 7.2 OCCURRENCE AND STATUS OF THE SPECIES ON SITE

A total of 20 individuals have been observed on site within the alignment of the proposed L-line transmission route. Twelve pelicans were recorded at flyover site number OBFLY06, and eight pelicans were recorded at flyover site number OBFLY03 (Figures 4 through 8). A complete version of the survey data is located in Appendix A.

### 7.3 EFFECTS OF THE PROJECT ON BROWN PELICAN

Although the brown pelican has been recorded in the project vicinity, the implementation of the proposed mitigation measures is expected to keep impacts to a minimum.

During plant commissioning, a method used to clean piping called "steam blows" creates substantial noise. A steam blow results when high-pressure steam is allowed to escape into the atmosphere through the steam piping to clean the piping. The steam blow is expected to last for approximately 72 hours. The steam blow is necessary after erection and assembly of the systems because the piping and tubing that comprise the steam path accumulate dirt, rust, scale, and construction debris. It prevents debris from entering the steam turbine. Unsilenced steam blows would produce a sound level of approximately 102 dBA at the closest point to the brown pelican habitat (approximately 650 feet from the source). The project proposes to include a silencer,

designed by Fluid Kinetics Corporation, that would provide 44 dBA of attenuation. The resultant sound level in the habitat would be approximately 58 dBA. Therefore, no significant impacts to brown pelican would occur from the steam blows.

Sound levels as a result of plant operation within the brown pelican habitat located to the northwest and west would be less than 60 dBA  $L_{eq}$ . Therefore, no significant noise impacts to the brown pelican would occur as a result of plant operation.

Bird flight diverters may be installed in strategic locations along the transmission lines to make the lines more visible to the birds. This measure is expected to reduce the number of bird casualties associated with the new transmission lines. Therefore, no significant adverse effects on brown pelican are expected to result from the construction or operation of the proposed project.

#### 8.1 REGIONAL DISTRIBUTION OF YUMA CLAPPER RAIL AND LOCAL PLANS

#### 8.1.1 Historic and Existing Known Distribution

The Yuma clapper rail (*Rallus longirostris yumanensis*) is a Federally endangered and State threatened bird. It is common in summer, in localized freshwater wetlands in the Salton Basin and the lower Colorado River (Garrett and Dunn 1981, Wilbur 1987). It is found at both ends of the Salton Sea and is known to be a breeding species in marshes on the lower Alamo and New Rivers. Its winter occurrence is uncertain, probably owing to its low detectability when not courtship-calling (Garrett and Dunn 1981). These secretive birds prefer extensive and undisturbed marshes for foraging and nesting, but they are adaptable to a range of ephemeral and disturbed wetland conditions in the interior (Garrett and Dunn 1989).

#### 8.1.2 Regional and Local Plans

At this time, there is no approved habitat conservation plan for Imperial County. The Coachella Valley NCCP is in progress, but is not yet approved. The Refuge and the CDCA are located within Imperial County, but will not be adversely impacted by project activities.

#### 8.2 OCCURRENCE AND STATUS OF THE SPECIES ON SITE

In a survey conducted by Ogden in 1994, a total of eight clapper rails were detected on or adjacent to the study area. A single bird responded to taped calls at a freshwater marsh area at the southwest corner of Sinclair Road and Lateral Drain 4-A, near a potential well pad site. Seven clapper rails responded to calls from a freshwater marsh pond adjacent to the northern boundary of the project study area.

Two additional clapper rails were recorded at McKendry Road to Obsidian Butte adjacent to the plant site, during the 2001 surveys conducted by URS biologists. Another Yuma clapper rail was detected within a cattail-lined agricultural drainage that runs along the east side of Production Well Pad OB1 in the Spring of 2002. A complete version of the survey data is located in Appendix A.

#### 8.3 EFFECTS OF THE PROJECT ON YUMA CLAPPER RAIL

Although the Yuma clapper rail has been recorded in the project area, the enhancement of wetland habitat within the vicinity of the project area will serve as appropriate mitigation for project impacts. The pipeline crossing to Production Well Pad OB3 will directly impact 0.05 acre of habitat suitable for clapper rail. Noise from the construction of the power plant also may indirectly affect clapper rail use of habitat associated with Vail Drain 5 along Severe Road.

Sound levels as a result of plant construction within the Yuma clapper rail habitat located to the northwest and west would range from  $51\,dBA$  to  $70\,dBA$ . Sound levels would be at the higher range when working near the habitat and at the lower range at the farther point from the habitat. The USFWS considers  $60\,dBA$  L<sub>eq</sub> hourly to be the threshold of significance for breeding birds. Therefore, the Yuma clapper rail may be significantly impacted by construction noise during the breeding season.

During plant commissioning, a method used to clean piping called "steam blows" creates substantial noise. A steam blow results when high-pressure steam is allowed to escape into the atmosphere through the steam piping to clean the piping. The steam blow is expected to last for approximately 72 hours. The steam blow is necessary after erection and assembly of the systems because the piping and tubing that comprise the steam path accumulate dirt, rust, scale, and construction debris. It prevents the debris from entering the steam turbine. Unsilenced steam blows would produce a sound level of approximately 102 dBA at the closest point to the clapper rail habitat (approximately 650 feet from the source). The project proposes to include a silencer, designed by Fluid Kinetics Corporation, that would provide 44 dBA of attenuation. The resultant sound level in the habitat would be approximately 58 dBA. Therefore, no significant impacts to the Yuma clapper rail would occur from the steam blows.

A detailed project-specific construction noise assessment will be conducted during final design to determine the most practicable measures to reduce/mitigate construction noise impacts. Construction will be phased when practicable to avoid or minimize noise impacts within habitat occupied by the Yuma clapper rail.

Sound levels as a result of plant operation within the Yuma clapper rail habitat located to the northwest and west would be less than 60 dBA  $L_{eq}$ . Therefore, no significant noise impacts to the Yuma clapper rail would occur as a result of plant operation.

Bird diverters may be installed in strategic locations along the transmission line routes to make the lines more visible to the birds. This measure is expected to reduce the number of bird casualties associated with the new transmission lines. Therefore, although potential adverse effects on Yuma clapper rail may result from the construction of the proposed project, those impacts will not be significant after implementation of mitigation measures. SECTIONNINE Mountain Plover

#### 9.1 REGIONAL DISTRIBUTION OF MOUNTAIN PLOVER AND LOCAL PLANS

#### 9.1.1 Historic and Existing Known Distribution

The mountain plover (*Charadrius montanus*) is a Federally proposed threatened species and California species of special concern. This species is found in relatively specialized habitats, breeding only in arid shortgrass prairies and wintering in agricultural fields and heavily grazed rangelands. This species is occasionally observed in the Salton Sea area, and is usually associated with recently burned agricultural fields. Declines in the mountain plover population have been attributed to the conversion of the shortgrass prairie habitats to agricultural uses.

#### 9.1.2 Regional and Local Plans

At this time, there is no approved habitat conservation plan for Imperial County. The Coachella Valley NCCP is in progress, but is not yet approved. The Refuge and the CDCA are located within Imperial County, but will not be adversely impacted by project activities.

#### 9.2 OCCURRENCE AND STATUS OF THE SPECIES ON SITE

The mountain plover has not been observed within the SSU6 Project area, or at Obsidian Butte, but 139 individuals were observed in a freshly burned Bermuda grass field near Walker Road and Hoskins Road, about one mile west of the L-Line Interconnection route, on February 6, 2002, by AMEC biologists (D. King personal communication; Figure 5). A complete version of the survey data is located in Appendix A.

#### 9.3 EFFECTS OF THE PROJECT ON MOUNTAIN PLOVER

The project is not expected to affect mountain plover due to the abundance of potential wintering habitat in the project vicinity. The nomadic nature of this species precludes predicting their presence within a given area with any certainty. This species forages within agricultural fields that have been recently cleared or burned, a condition that is highly variable across the Imperial Valley throughout the year. The presence of mountain plover is not expected within any active project construction area. A project biologist will monitor the adjacent areas to determine whether mountain plover are in any adjacent potential habitat.

Sound levels as a result of plant operation within mountain plover habitat would be less than 60 dBA  $L_{eq}$ . Therefore, no significant noise impacts to the mountain plover would occur as a result of plant operation.

Bird flight diverters may be installed in strategic locations along the transmission lines to make the lines more visible to birds. This measure is expected to reduce the number of bird casualties associated with the new transmission lines. Therefore, no adverse effects on mountain plover are expected to result from the construction or operation of the proposed project.

# 10.1 REGIONAL DISTRIBUTION OF SOUTHWESTERN WILLOW FLYCATCHER AND LOCAL PLANS

#### 10.1.1 Historic and Existing Known Distribution

The southwestern willow flycatcher (*Empidonax traillii extimus*) is a Federal- and State-endangered species. It is a summer breeding resident in riparian habitats in southern California, southern Nevada, southern Utah, Arizona, New Mexico, western Texas, southwestern Colorado, and northwestern Mexico (USFWS 1995). It is restricted to dense riparian woodlands of willow, cottonwood, and other deciduous shrubs and trees. In general, the riparian habitat of this species tends to be rare, isolated, small and/or linear patches, separated by vast expanses of arid lands. The population of southwestern willow flycatcher in southern California was estimated to be less than 80 pairs in the early 1980's (Unitt 1984).

#### 10.1.2 Regional and Local Plans

At this time, there is no approved habitat conservation plan for Imperial County. The Coachella Valley NCCP is in progress, but is not yet approved. The Refuge and the CDCA are located within Imperial County, but will not be adversely impacted by project activities.

#### 10.2 OCCURRENCE AND STATUS OF THE SPECIES ON SITE

The southwestern willow flycatcher has not been observed within the project area. The closest recording of the species was three miles west of Niland, which is outside of the study area for this project. This species' preferred habitat also is not present in the project area.

#### 10.3 EFFECTS OF THE PROJECT ON SOUTHWESTERN WILLOW FLYCATCHER

The proposed project will not adversely affect the southwestern willow flycatcher. The project site does not support the preferred habitat, nor have any individuals been observed. Therefore, no adverse effects on this species are expected to result from the construction or operation of the proposed project.

#### 11.1 REGIONAL DISTRIBUTION OF CALIFORNIA BLACK RAIL AND LOCAL PLANS

#### 11.1.1 Historic and Existing Known Distribution

The California black rail (*Laterallus jamaicensis coturniculus*) is a State-threatened species. The black rail is a marsh-dweller of uncertain status at the Salton Sea. It has suffered statewide population decline and in the interior is common only along the U.S. section of the lower Colorado River Valley (Garrett and Dunn 1981). There are no recent records for Baja California (Wilbur 1987). Occurrence is scattered in the Salton Basin, although some locations have numerous calling birds over periods of several weeks in spring (McCaskie 1979), strongly suggesting nesting. Winter records are few, and detectability for this species is very low in the non-breeding season. Nevertheless, migratory behavior has been suggested (Small 1974).

Black rails require dense vegetation cover at all times. They utilize *Salicornia* (pickleweed) marshes on the coast and *Scirpus* (bulrush) marshes along the Colorado River, but habitat associations in the Salton Basin have not been described.

#### 11.1.2 Regional and Local Plans

At this time, there is no approved habitat conservation plan for Imperial County. The Coachella Valley NCCP is in progress, but is not yet approved. The Refuge and the CDCA are located within Imperial County, but will not be adversely impacted by project activities.

#### 11.2 OCCURRENCE AND STATUS OF THE SPECIES ON SITE

In surveys conducted by Courtney Conway (personal communication 2002; Conway et al. 2002) in 2000-2001, no black rails were detected within the project area.

#### 11.3 EFFECTS OF THE PROJECT ON CALIFORNIA BLACK RAIL

The proposed project will not adversely affect the California black rail. This species has not been observed within the project area. The nearest known black rail sighting is in the vicinity of Seely (P. Unitt personal communication). Therefore, no adverse effects on California black rail are expected to result from the construction or operation of the proposed project.

# 12.1 REGIONAL DISTRIBUTION OF AMERICAN WHITE PELICAN AND LOCAL PLANS

#### 12.1.1 Historic and Existing Known Distribution

The American white pelican (*Pelecanus erythrorhynchos*) is a State species of special concern. It is a northern breeder that utilizes southern California in the non-breeding season. The Salton Sea supports the largest regional proportion of birds, which primarily stop over on spring and fall migration through the interior of California.

American white pelicans require expanses of fairly shallow, calm water for foraging. Protection from disturbance is also important. These birds prefer fresh water, concentrating on various river mouths on the Salton Sea (Garrett and Dunn 1981). American white pelicans are known to feed and roost in the Salton Sea around the mouth of the Alamo River (B. Radke, personal communication). American white pelicans use the Salton Sea as a migratory stopover and wintering area. As a migratory stopover, individual pelicans appear to use the Salton Sea for a few weeks to a few months before continuing on their migration to Mexico (Shuford et al. 1999). Some birds probably remain at the Salton Sea throughout the winter rather than continuing on to Mexico.

The number of pelicans using the Salton Sea at any time varies substantially. According to counts reported by USFWS and aerial surveys conducted by Point Reyes Bird Observatory (Shuford et al. 2000), the Salton Sea at times supports one of the largest concentrations of white pelicans in the Pacific Flyway. McKay reported maximum counts of white pelicans at the Salton Sea during 1984 to 1990. The maximum counts ranged from 2,000 to 17,000 and usually occurred in February. The average of maximum counts for these years was 6,500 American white pelicans. Based on a sharp decline in counts between 1985 and 1990, the population of pelicans using the Salton Sea was believed to be declining. However, the aerial surveys conducted in 1999 found 16,697 pelicans using the Salton Sea in January and February, a similar number as reported by McKay in 1985 (17,000; Shuford et al. 2000). The following November, however, Shuford et al. (2000) reported 197 American white pelicans at the Salton Sea. The number of white pelicans using this area therefore appears to vary significantly from year to year.

#### 12.1.2 Regional and Local Plans

At this time, there is no approved habitat conservation plan for Imperial County. The Coachella Valley NCCP is in progress, but is not yet approved. The Refuge and the CDCA are located within Imperial County, but will not be adversely impacted by project activities.

#### 12.2 OCCURRENCE AND STATUS OF THE SPECIES ON SITE

A total of 122 American white pelicans have been recorded in the project area. A total of 36 individuals were observed at flyover site D24, 67 pelicans were recorded at flyover site number OBFLY01, two pelicans were recorded at flyover site number OBFLY02, and 17 pelicans were

recorded at flyover site OBFLY10 (Figures 4 through 8). A complete version of the survey data is located in Appendix A.

#### 12.3 EFFECTS OF THE PROJECT ON AMERICAN WHITE PELICAN

Although the American white pelican has been recorded in the project area, the implementation of proposed mitigation measures is expected to keep impacts to a minimum.

During plant commissioning, a method used to clean piping called "steam blows" creates substantial noise. A steam blow results when high-pressure steam is slowed to escape into the atmosphere throughout the steam piping to clean the piping. The steam blow is expected to last for approximately 72 hours. The steam blow is necessary after erection and assembly of the systems because the piping and tubing that comprise the steam path accumulate dirt, rust, scale, and construction debris. It prevents the debris from entering the steam turbine. Unsilenced steam blows would produce a sound level of approximately 102 dBA at the closest point to the American white pelican habitat (approximately 650 feet from the source). The project proposes to include a silencer, designed by Fluid Kinetics Corporation that would provide 44 dBA of attenuation. The resultant sound level in the habitat would be approximately 58 dBA. Therefore, no significant impacts to American white pelican would occur from the steam blows.

Bird flight diverters may be installed in strategic locations along the transmission lines to make the lines more visible to the birds. This measure is expected to reduce the number of bird casualties associated with the new transmission lines. Therefore, no significant adverse effects on American white pelican are expected to result from the construction or operation of the proposed project.

#### 13.1 REGIONAL DISTRIBUTION OF BURROWING OWL AND LOCAL PLANS

#### 13.1.1 Historic and Existing Known Distribution

The burrowing owl (*Athene cunicularia*) is a State species of special concern. The breeding range of the North American subspecies of burrowing owl extends south from southern Canada into the western half of the United States and south into Baja California and central Mexico (Johnsgard 1988). Burrowing owls inhabit open areas such as grasslands, pastures, coastal dunes, desert scrub, and the edges of agricultural fields (Unitt 1984). They use rodent burrows or construct burrows in semi-compacted soil in the slopes of drainage channels next to agriculture fields throughout the year for shelter from weather and predators. As a result, burrowing owls occur at a very high density in the Imperial Valley.

Nesting densities vary from eight pairs per 1-square kilometer in optimal habitat, to one pair per 58-square kilometers in poor quality habitat (Johnsgard 1988). Burrowing owls form short-term pair bonds with male territoriality peaking during pair formation and declining after egg laying. Burrowing owls have declined through much of their range because of habitat loss due to urbanization, agricultural conversion, and destruction of ground squirrel colonies (Remsen 1978). Although burrowing owls are relatively tolerant of lower levels of human activity, there are human-related impacts such as shooting and the introduction of non-native predators that are also causes of their decline (Zarn 1974). This species often nests and perches near roads where they are vulnerable to roadside shooting, being hit by cars, road maintenance operations, and general harassment (Remsen 1978).

#### 13.1.2 Regional and Local Plans

At this time, there is no approved habitat conservation plan for Imperial County. The Coachella Valley NCCP is in progress, but is not yet approved. The Refuge and the CDCA are located within Imperial County, but will not be adversely impacted by project activities.

#### 13.2 OCCURRENCE AND STATUS OF THE SPECIES ON SITE

In the surveys conducted by Ogden in 1994, 25 burrowing owls (seven pairs, seven individuals at burrow, and four foraging individuals) were detected along 16.5 miles of canals and ditches within the project study area. A total of 17 burrows with signs of occupancy also were detected.

In the surveys conducted by URS from 1999 through 2002, numerous owls were observed. Burrowing owls have the potential to occupy the earthen banks of agricultural canals and drains, indicating the owls could inhabit much of the project area. A complete version of the survey data is located in Appendix A.

#### 13.3 EFFECTS OF THE PROJECT ON BURROWING OWL

The burrowing owl is common throughout the study area, and the Imperial Valley in general. The project, however, will not have a significant adverse impact on this species. Preconstruction burrowing owl surveys during the non-breeding season will identify occupied owl habitat in the project vicinity. Where possible, active owl burrows will be avoided. In the event

that active burrows within 150 feet from construction activity cannot be avoided, they will be collapsed and the owls passively relocated. A proposed mitigation and monitoring program will describe the procedures for removing and relocating burrowing owls.

Based on implementation of these measures, no significant adverse effects on burrowing owls are expected to result from the construction or operation of the proposed project.

#### 14.1 REGIONAL DISTRIBUTION OF GULL-BILLED TERN AND LOCAL PLANS

#### 14.1.1 Historic and Existing Known Distribution

The gull-billed tern (*Sterna nilotica*) is a California species of special concern that established a highly disjunct breeding colony on the Salton Sea in the 1920s. Breeding numbers on the Salton Sea fluctuate dramatically between years and locations (McCaskie 1989, 1990, Molina 2000). During the 1990s, the Salton Sea population has ranged from 80 to 170 pairs. Breeding numbers have steadily declined as protected nesting islets and levees become inundated by the rising water level (Garrett and Dunn 1981). The main nesting location of this species is on Rock Hill, outside the project area, supporting up to 131 breeding pairs in 2000 (Molina 2000). Gull-billed terns did nest on the shoreline of Obsidian Butte during the mid-1990s.

Gull-billed terns are versatile feeders and are equally adept at plunge-diving in water and picking invertebrate prey on the wing from ground or vegetation (Cogswell 1977). Agricultural fields, common in the Salton Basin, are often used (Small 1974).

#### 14.1.2 Regional and Local Plans

At this time, there is no approved habitat conservation plan for Imperial County. The Coachella Valley NCCP is in progress, but is not yet approved. The Refuge and the CDCA are located within Imperial County, but will not be adversely impacted by project activities.

#### 14.2 OCCURRENCE AND STATUS OF THE SPECIES ON SITE

In the survey conducted by Ogden in 1994, the closest nesting colony of gull-billed terns was located approximately 2,000 feet from of the project facility (Production Well Pad OB3). There were no sightings recorded within the project study area by URS biologists during 1999-2002 surveys.

#### 14.3 EFFECTS OF THE PROJECT ON GULL-BILLED TERN

Due to the fact that the gull-billed tern has not been observed within the project area, and since the closest sighting occurred eight years ago in an area not currently being utilized by the species, it is not likely that the project will adversely impact the species. Bird flight diverters may be installed in strategic locations along the transmission lines to make the lines more visible to the birds. This measure is expected to reduce the number of bird casualties associated with the new transmission lines. Therefore, no significant adverse effects on gull-billed tern are expected to result from the construction or operation of the proposed project.

The SSU6 Project will not have any significant adverse effect on any listed species, due to implementation of avoidance measures and non-invasive routing of project components.

The potential for cumulative impacts from the project is associated with the minor potential to disrupt animal use of and wildlife movement through the area of the Salton Sink surrounding the plant facilities site. All other impacts affect relatively minor areas and are temporary in nature.

There will be a loss of less than 0.1 acre of suitable Yuma clapper rail habitat, potential construction noise impacts to habitat potentially occupied by listed species, loss of foraging habitat for burrowing owls and the displacement of at least three pairs of owls currently on or adjacent to areas that will be graded. Pre-construction burrowing owl surveys will determine the number of owls that will need to be passively relocated.

The cumulative impacts to specific environmental resources resulting from the proposed project and other projects in the area are less than significant. These other projects would be mitigated through project specific mitigation measures and coordinated regionally through mitigation from the Salton Sea Authority and IID. A list of the proposed projects in the area appears below. The source of this information was the Draft Habitat Conservation Plan for the IID Water Conservation and Transfer Project (IID HCP).

- North Baja Pipe
- State Route 78/111 Expressway (Brawley Bypass)
- Solar Evaporation Pond Pilot Project
- Baja California Power and Sempra Energy Resources
- Imperial Irrigation District Water Conservation and Transfer Project/Habitat Conservation Plan

As discussed in the previous sections, this project will not result in any significant adverse impact to least Bell's virco, brown pelican, American white pelican, Yuma clapper rail, mountain plover, burrowing owl, gull-billed tern, southwestern willow flycatcher, desert pupfish, or Peirson's milk-vetch. The following measures will be implemented to further ensure that the project will not result in any take of listed species.

Most of the project is proposed in existing agricultural land use and disturbed habitats in the SSU6 Project area southeast of the Salton Sea. These habitats do not normally support sensitive species; however, Yuma clapper rails and burrowing owls use adjacent habitat, such as the marshes and roadsides discussed earlier. CE Obsidian Energy LLC (CEOE) will implement proven protective measures that have been used by CEOE affiliates for previous projects adjacent to clapper rail and burrowing owl habitat to prevent impacts to Yuma Clapper rails and burrowing owls using adjacent habitat.

#### 16.1 PREVENTIVE MEASURES

- **Drainage and Erosion** The project shall be designed and constructed to prevent spills from endangering adjacent properties and waterways and to prevent runoff resulting in erosion, siltation, or other adverse water quality impacts to sensitive biological habitats.
- Construction Noise Abatement A detailed project-specific construction noise assessment will be conducted during final design to determine the most practicable measures to reduce/mitigate significant construction noise impacts. Construction activities will need to occur throughout the year, with the exception of Production Well Pads OB1, OB2, and OB3 and the pipelines from Production Well Pads OB1, OB2, and OB3 to the plant site and the associated widening of the access road to Obsidian Butte. Construction activities that exceed the 60 dBA standard would not occur during the breeding season (March through July). A construction noise assessment will be conducted during final design to determine practicable mitigation measures to minimize noise impacts from construction at the plant site to occupied listed species breeding habitat.
- Well Pad Construction Standards —Grading operations must avoid placing fill in sensitive habitat. Well pad cellars will be designed to prevent wildlife entry and entrapment.
- **Light Shielding** Light from construction or facility operations activities adjacent to sensitive habitat will be shielded downward to prevent side casting of light toward wildlife and sensitive-species habitat.
- Wildlife Monitoring CEOE will implement the above mitigation measures regarding construction standards, drainage and erosion, and noise abatement. Additionally, CEOE shall participate in a joint monitoring program with Refuge personnel for a three-year period following construction.
- Construction Monitoring During construction of the power plant facilities and associated
  well pads and transmission lines, a biologist approved by CDFG and USFWS will monitor
  construction activities near occupied listed species breeding habitat. Noise monitoring within
  occupied listed species breeding habitat will also be conducted to verify compliance with any
  applicable noise restrictions.

- Education Program Training will be provided during construction to educate construction contractors of sensitive biological resource issues and areas intended for avoidance. Sensitive resources near construction areas will be identified and clearly marked for avoidance.
- Revegetation Temporary construction disturbance areas will be allowed to naturally revegetate with pre-disturbance native species. Grades and soil surfaces will be maintained to support this type of natural revegetation. Exotic species will be precluded from becoming established through implementation of a three-year post-construction monitoring and control program.

#### 16.2 PROPOSED MITIGATION MEASURES

- Habitat Creation/Enhancement Mitigation for impacts to about 0.05 acres of Yuma clapper rail habitat may include enhancement of an existing wetland potentially used by clapper rail within the project vicinity.
- Construction Noise Abatement Construction activities will need to occur throughout the year, with the exception of Production Well Pads OB1, OB2 and OB3 and the pipelines from Production Well Pads OB1, OB2, and OB3 to the plant site and the associated widening of the access road to Obsidian Butte. These well pads and pipelines will be constructed during the non-breeding season between August and February. A construction noise assessment will be conducted during final design to determine practicable mitigation measures to minimize noise impact to occupied clapper rail habitat. If practicable, the steam blow process will be scheduled to coincide with the non-breeding season of the Yuma clapper rail.

#### 16.3 BURROWING OWL MITIGATION MEASURES

- Education Program Workers will be responsible for attending an education program related to the identification of burrowing owls and their habitat. Workers will be instructed to report all observations of burrowing owls, whether alive, injured, or dead. Workers will be instructed to exercise care when operating in areas inhabited by burrowing owls so as to avoid injuring them. Workers will not be permitted to collapse or fill burrows.
- Pre-construction CEOE will notify the Project Biologist by February 1 prior to ground
  disturbing activities planned to occur between March 1 and August 1 in burrowing owl
  habitat. The biologist will survey the area within 150 feet of the construction area, determine
  whether active burrows are within that area, and collapse burrows if necessary. The
  procedures for surveying and installing passive relocation vents (one-way exclusion devices)
  will be consistent with protocols currently approved by CDFG.
- **Construction** If construction activities are completed during the breeding season (March through July), a biological monitor approved by CDFG and USFWS must be on site.

#### ADDITIONAL TRANSMISSION LINE MITIGATION MEASURES 16.4

Bird Flight Diverter Installation – The location of the bird flight diverters is based on the flyover survey data (see Appendix A). In locations where the number of birds flying perpendicular to the proposed line exceeded 30 individuals, bird flight diverters will be installed. These locations are as follows: OBFLY1, 02, 06, 09, 10, 14, 17, and D24 (Figure 9). The bird flight diverters will be maintained and replaced as needed.

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### **Tables**

# Table 1 SENSITIVE SPECIES WITH THE POTENTIAL TO OCCUR WITHIN THE SALTON SEA UNIT 6 STUDY AREA

Common Name	Scientific Name	Federal	State	Observed	
Peirson's milkvetch	Astragalus magdalenae var. peirsonii	Threatened	Species of Special Concern	No	
American white pelican	Pelecanus erythrorhynchos	None	Species of Special Concern	Yes	
Brown pelican	Pelecanus occidentalis	Endangered	Endangered	Yes	
Double-crested cormorant	Phalacrocorax auritus	None	Species of Special Concern	Yes	
Least bittern	Ixobrychus exilis	None	Species of Special Concern	No	
White-faced ibis	Plegadis chihi	None	Species of Special Concern	Yes	
Cooper's hawk	Accipiter cooperi	None	Species of Special Concern	No	
Sharp-shinned hawk	Accipiter striatus	None	Species of Special Concern	No	
Northern harrier	Circus cyaneus	None	Species of Special Concern	Yes	
Ferruginous hawk	Buteo regalis	None	Species of Special Concern	Yes	
Merlin	Falco columbarius	None	Species of Special Concern	Yes	
Osprey	Pandion haliaetus	None	Species of Special Concern	Yes	
Yuma clapper rail	Rallus longirostris yumanensis	Endangered	Threatened	Yes	
Mountain plover	Charadrius montanus	Proposed Threatened	Species of Special Concern	No	
Long-billed curlew	Numenius americanus	None	Species of Special Concern	Yes	
Black tern	Chlidonias niger	None	Species of Special Concern	Yes	
California gull	Larus californicus	None	Species of Special Concern	Yes	
Laughing gull	Larus atricilla	None	Species of Special Concern	No	
Black skimmer	Rynchops niger	None	Species of Special Concern	No	
Caspian tern	Sterna caspia	None	Species of Special Concern	No	
Elegant tern	Sterna elegans	None	Species of Special Concern	No	
Van Rossem's gull-billed tern	Sterna nilotica	None	Species of Special Concern	Yes	
Burrowing owl	Athene cunicularia	None	Species of Special Concern	Yes	
Southwestern willow flycatcher	Empidonax traillii extimus	Endangered	Endangered	No	
Loggerhead shrike	Lanius ludovicianus	None	Species of Special Concern	No	
Least Bell's vireo	Vireo bellii pusillus	Endangered	Endangered	No	
Horned lark	Eremophila alpestris actia	None	Species of Special Concern	Yes	
Yellow warbler	Dendroica petechia	None	Species of Special Concern	No	
Yellow-breasted chat	Icteria virens	None	Species of Special Concern	No	
LeConte's thrasher	Toxostoma lecontei	None	Species of Special Concern	No	
Flat-tailed horned lizard	Phrynosoma mcallii	Proposed Endangered	Species of Special Concern	No	
Desert pupfish	Cyprinodon macularius	Endangered	Endangered	No	
California black rail	Laterallus jamaicensis coturniculus	None	Threatened	No	

Table 2
SURVEY DATES AND CONDITIONS FOR THE SSU6 STUDY AREA

Date	Observer Temperature (°F)		Wind	Cloud Cover	
9/22/94	KP, PU	90°	0	10%	
10/4/94	KP	No Data	No Data	No Data	
10/17/94	KP	No Data	No Data	No Data	
11/1/94	DK	No Data	No Data	No Data	
11/14/94	KP	No Data	No Data	No Data	
11/15/94	KP	No Data	No Data	No Data	
12/16/99	PU, GG, JR, TS	55-60°	1-2 mph	Thin	
12/17/99	JR, TS	50°	0 mph	Clear	
1/7/00	JR, BL, PR	55°	1-5 mph	Scattered rain	
1/31/00	JR, BL	65°	5-10 mph	Cloudy	
3/24/00	JR, BL	72°	Calm	Partly cloudy	
3/31/00	TS, TW	68°	Very strong	Clear	
4/14/00	PR, JR	70°	Extremely windy	Mostly sunny	
4/28/00	PR, JR	80°	0 mph	Haze	
3/5/01	TW, HG	60-75°	1-6 mph	Partly cloudy	
4/13/01	TW, HG	55°	0-3 mph	Clear	
5/3/01*	TW, HG, PR	65-75°	7-15 mph	Clear	
5/4/01*	PR, JR, TW, HG	70°	Calm	Clear	
5/17/01	HG, PR, TW, SW	75-78°	Calm	Clear	
6/7/01	TW, HG, SW	75°	0-5 mph	Clear	
6/8/01	TW, HG, SW	75°	0-5 mph	Clear	
6/28/01	TW, SW	65°	0-3 mph	Clear	
10/17/01	PR, HG	60-90°	0-2 mph	Partly cloudy	
11/15/01	PR, HG	50-65°	0-5 mph	Clear	
11/16/01	HG, PR	50°	Calm	Clear	
11/20/01	HG, PR	48-68°	0-5 mph	Clear	
11/21/01	HG, PR	40-48°	0-2 mph	Clear	
11/27/01	PR, HG	45-50°	15-40 mph	Clear	
11/28/01	HG, PR	40°	Calm	Clear	
12/13/01	PR, HG	40-65°	0-2 mph	Clear	
12/14/01	HG, PR	40°	Calm	Partly cloudy	
1/10/02	JR, PR	48-68°	0-10 mph	Clear	
1/11/02	JR, PR	48-68°	5-10 mph	Clear	
2/5/02	HG, BL, PR	43-70°	0-15 mph	Clear	
2/6/02	PR, HG, BL	37-52°	0-5 mph	Clear	
4/4/02*	JR, HG, RL	58-88°	0-1 mph	Clear	
4/26/02	PR	70°	10-20 mph	Partly-mostly cldy	
5/14/02	PR	85°	Calm	Hazy/clear	
5/23/02	PR	60-76°	0-5 mph	Clear	
5/31/02	PR, LH	78-100°	0-5 mph	Partly cloudy	
6/5/02	PR. LH	85°	Calm	Hazy	
6/13/02	PR, LH	72°	0-3 mph	Hazy	
6/14/02	PR, LH	75°	0-2 mph	Hazy	

	Initials Observer Name	Qualifications
BL	Brian Lohstroh	B.S. Ecology, Behavior & Evolution, 5 years of experience
DK	David King	B.S. Biology, 14 years of experience
GG	Geoff Gray	M.S. Biology, 6 years of experience
HG	Heather Green	B.S. Environmental Studies, 4 years of experience
JR	Jim Rocks	M.S. Biological Sciences, 5 years of experience
KP	Kris Preston	B.S. Biology, 6 years of experience
LH	Lincoln Hulse	B.S. Biology, 3 years of experience
PR	Phil Richards	B.S. Biological Sciences, 3 years of experience
PU	Phil Unitt	B.S. Zoology, 25 years of experience
RL	Rebecca Loomis	B.S. Environmental Biology, 6 years of experience
TŞ	Tom Strong	Ph.D. Biology, 15 years of experience
T₩	Theresa Weber	B.A. Biology, 2 years of experience

<sup>\*</sup>focused plant surveys conducted

Table 3
POTENTIAL IMPACTS TO SENSITIVE SPECIES BY PROJECT COMPONENT

Species	Plant Site	Transmission Lines	Well Pads	Pipelines	
American White Pelican (Pelecanus erythrorhynchos)	Moderate. White pelicans have been observed at this location.	Low. White pelicans have been observed, but mitigation measures should decrease impacts.	Low. White pelicans have not been observed at this location.	Low. White pelicans have not been observed at this location.	
Brown Pelican ( <i>Pelecanus occidentails</i> )	Low. Brown pelicans have not been observed at this location.	Low. Brown pelicans have been observed, but mitigation measures should decrease impacts.	Low. Brown pelicans have not been observed at this location. Attempted to nest on Obsidian Butte in the mid 1990s.	Moderate. Brown pelicans have been observed at this location.	
Yuma Clapper Rail (Rallus longirostris yumanensis)	Low. Potential habitat in Vail Drain 5 along Severe Road. Rail observed near McKendry Road to Obsidian Butte. Construction noise requires a detailed assessment during final design phase.	along not been observed at this location.  d to bise liled		Moderate. Yuma clapper rail observed at McKendry Road to Obsidian Butte (pipeline to OB3 well pad and adjacent to pipeline for OB1).	
Mountain Plover (Charadrius montanus)	Low. This species has not been observed at this location.	Moderate. This species has been observed about 1 mile from L line route near Lack Road.	Low. This species has not been observed at this location.	Low. This species has not been observed at this location.	
Gull-billed Tern (Sterna nilotica)	not been observed at this location.		Low. This species has not been observed at this location, but historically nested on Obsidian Butte in the mid-1990s.	Low. This species has not been observed at this location.	
Burrowing Owl  Athene cunicularia)  Moderate. Burrowing owls have been observed at this location.		Moderate. Burrowing owls have been observed at this location.	Moderate. Burrowing owls have been observed at OB2 and OBI 3 well pads	Moderate. Burrowing owls have been observed at this location.	
Southwestern Willow Flycatcher (Empidonax traillii extimus)	Low. This species has not been observed at this location.	Low. This species has not been observed at this location.	Low. This species has not been observed at this location.	Low. This species has not been observed at this location.	
Least Bell's Vireo (Vireo bellii pusillus)	Low. This species has not been observed at this location.	Low. This species has not been observed at this location.	Low. This species has not been observed at this location.	Low. This species has not been observed at this location.	

## Tables

Species Plant Site		Transmission Lines	Transmission Lines Well Pads	
Desert Pupfish (Cyprinodon macularius)	Low. This species has not been observed at this location.	Low. This species has not been observed at this location.	Low. This species has not been observed at this location.	Low. This species has not been observed at this location since 1994, but has historically been found at the mouth of all Vail Drains in the project area.
Peirson's Milkvetch (Astragalus magdalenae var. peirsonii)	Low. This species has not been observed at this location.	Low. This species has not been observed at this location.	Low. This species has not been observed at this location.	Low. This species has not been observed at this location.

Table 4
DESERT PUPFISH SURVEY RESULTS

Drain Year of Survey Month and Days of S		Month and Days of Survey	No. of Pupfish
Vail 4A	1993	Aug. 17 and Aug. 18, Sept. 9 and 10	0
	1994	Aug. 4 and 5, Aug 15 and 16, Aug. 16 and 17	0
	1996	July 10, July 29 and October 8	0
	1998	Not Surveyed	0
Vail 3	1993	Aug. 18 and 19, Sept. 9 and 10	0
	1994	July 26 and July 27, Aug. 10 and 11, Aug. 31 and Sept. 1	0
	1996	Not Surveyed	0
	1998	Not Surveyed	0
Vail 3A	1993	Aug. 18 and 19, Sept. 9 and 10	0
Vail 5 (Lat)	1993 Aug. 17 and 18, Sept. 8 and 9 – Above McKendry Road		0
	1993	Aug. 17 and 18, Sept. 20 and 21 – Below McKendry Road*	0
	1994	July 26 and July 27, Aug. 15 and 16 - Above McKendry Road	0
	1994	July 26 and July 27, Aug. 15 and 16 – Below McKendry Road*	53
	1996	July 10, July 29 and August 27	0
	1998	August 25 – Below McKendry Road*	0
	1998	Above McKendry Road – Not Surveyed	-
	2001	August 31 – Below McKendry Road	0
	2002	February 9,2002 Access road to Obsidian Butte	0

Date Source: Sharon Keeney, California Department of Fish and Game, 2002; Dr. A. Schoenherr Feb. 2002

<sup>\*</sup> Shoreline pool. In 1994, 53 desert pupfish were captured during the time between 0740 on August 15 and 0708 on August 16. It must be noted that in 1993 and 1994, traps were set overnight. After 1994, however, traps were fished for three to four hours during the day and were carefully attended; the change in survey protocol resulted from problems with vandalism and theft.

Table 5
ESTIMATED HABITAT IMPACTED BY PROJECT COMPONENT IN ACRES\*

Project Component	Agriculture	Tamarisk scrub	Desert sink scrub	Creosote bush scrub	Freshwater Marsh	Developed/ disturbed	Total
Plant Facilities Site	80.0	0	0	0	0	0	80.0
Production wells	16.8	0	2.0	0	0	4.8	23.6
Injection wells	14.5	0	0	0	0	0	14.5
Well Pipelines	140.0	0.33	0.02	0	0.08	0	140.43
Water Supply line	0.7	0	0	0	0	0	0.7
L-Line Interconnection	71.3	0	0.5	14.2	0	1.5	87.5
IID Midway Interconnection	79.0	0	0	0	0	7.3	86.3
Pull Sites	27.9	0	0	2.3	0	1.7	31.9
T-Line Staging Area/ Access Roads <sup>1</sup>	0	0	0	0	0	38.0	38.0
Totals	430.2	0.33	2.52	16.5	0.08	53.3	502.93

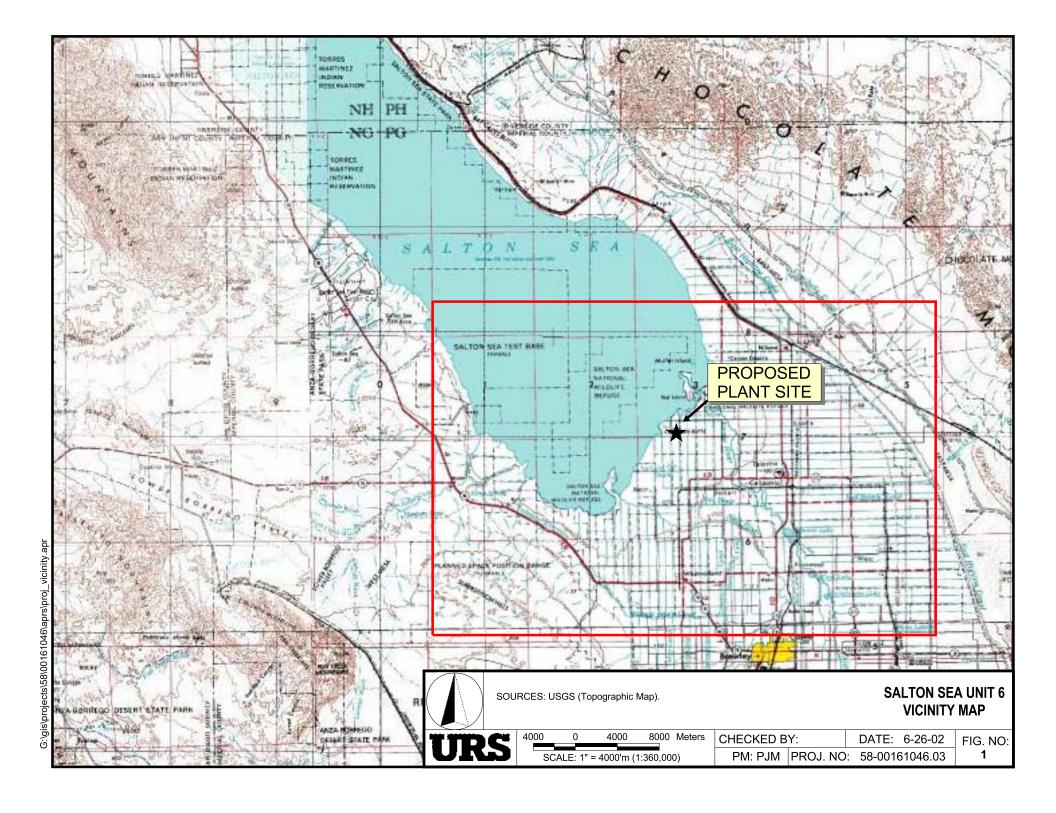
<sup>\*</sup> All acreages approximate

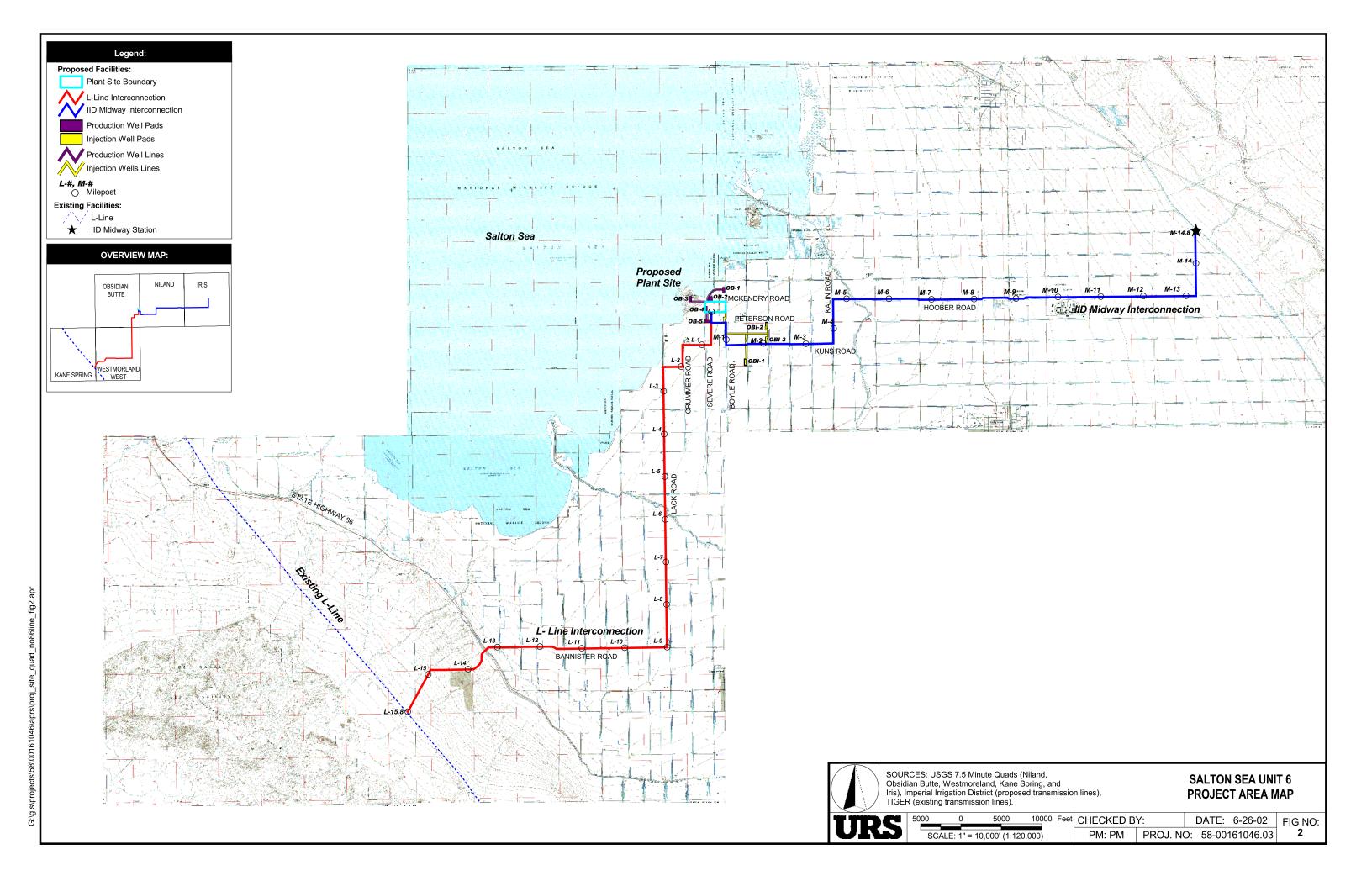
<sup>1</sup> Implementation of the transmission lines includes the following assumptions:

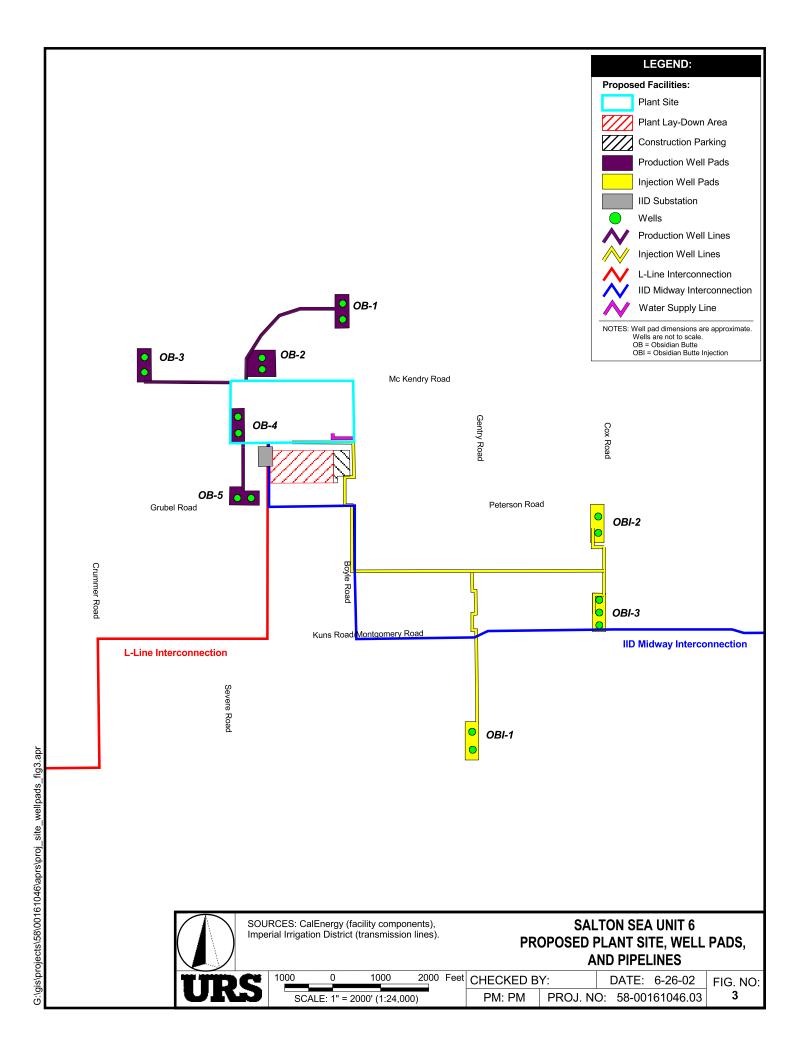
<sup>8</sup> acres of impact would occur in disturbed habitat for access roads

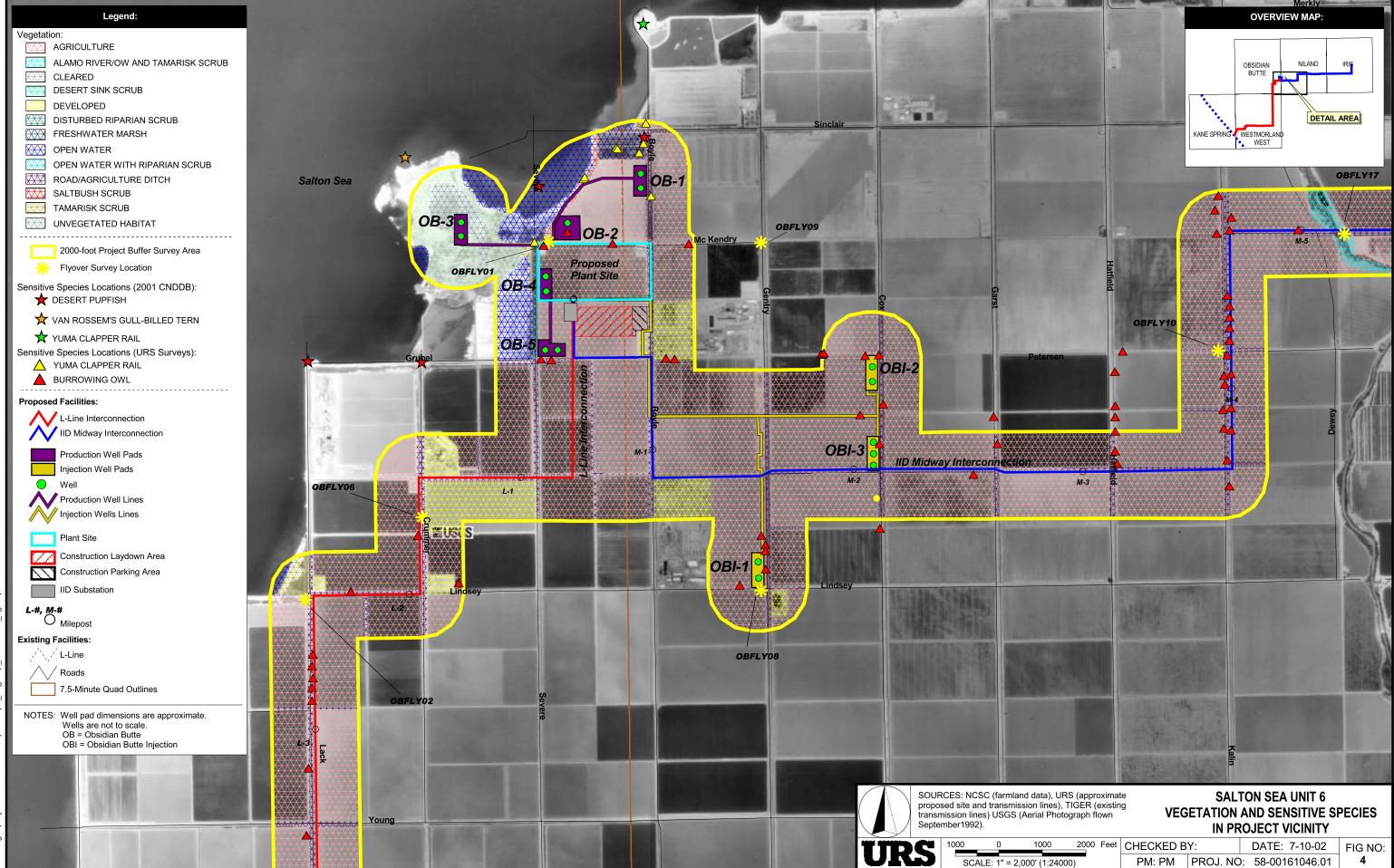
<sup>30</sup> acres of impact would occur in disturbed habitat for staging areas

## **Figures**

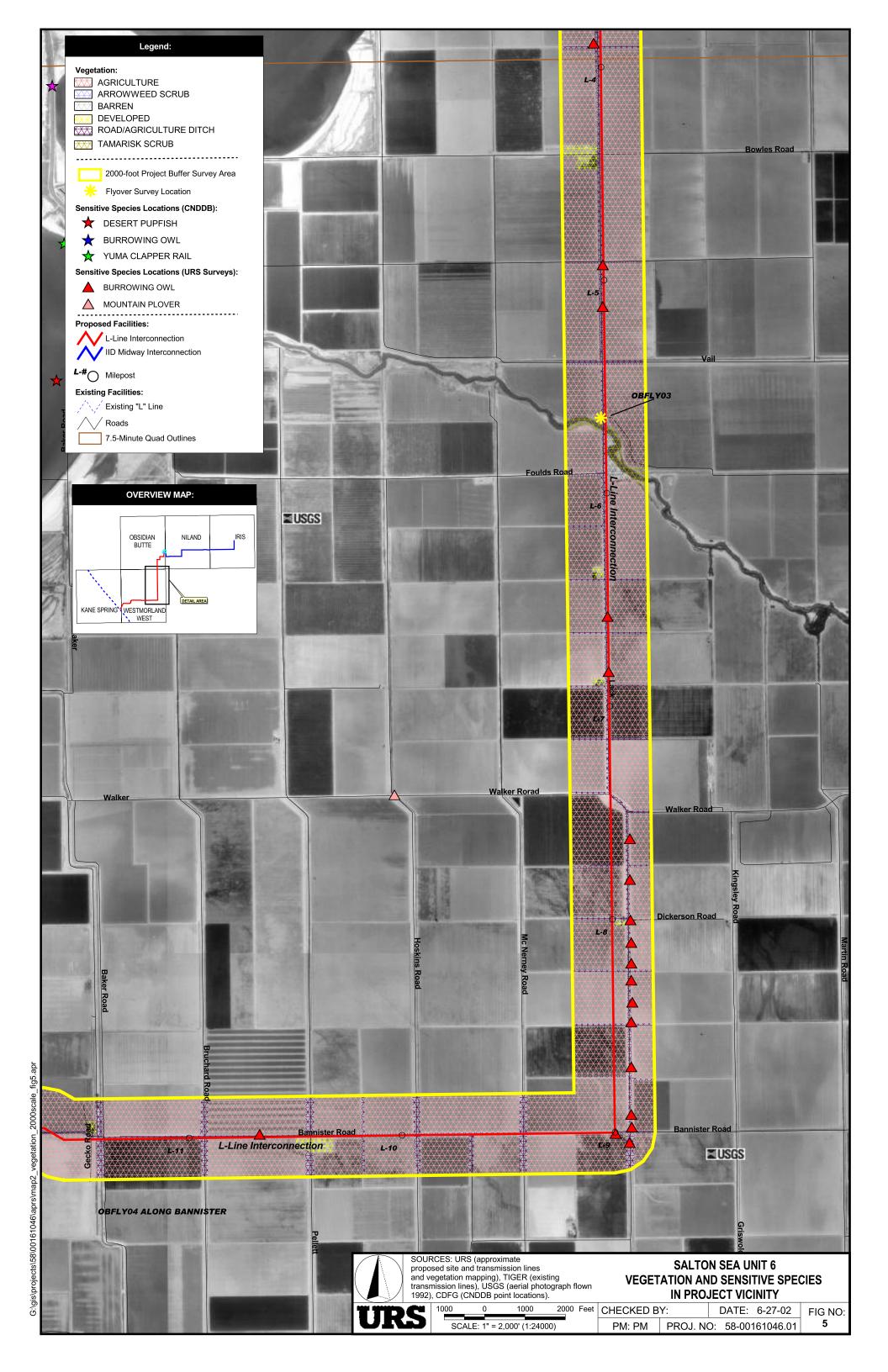


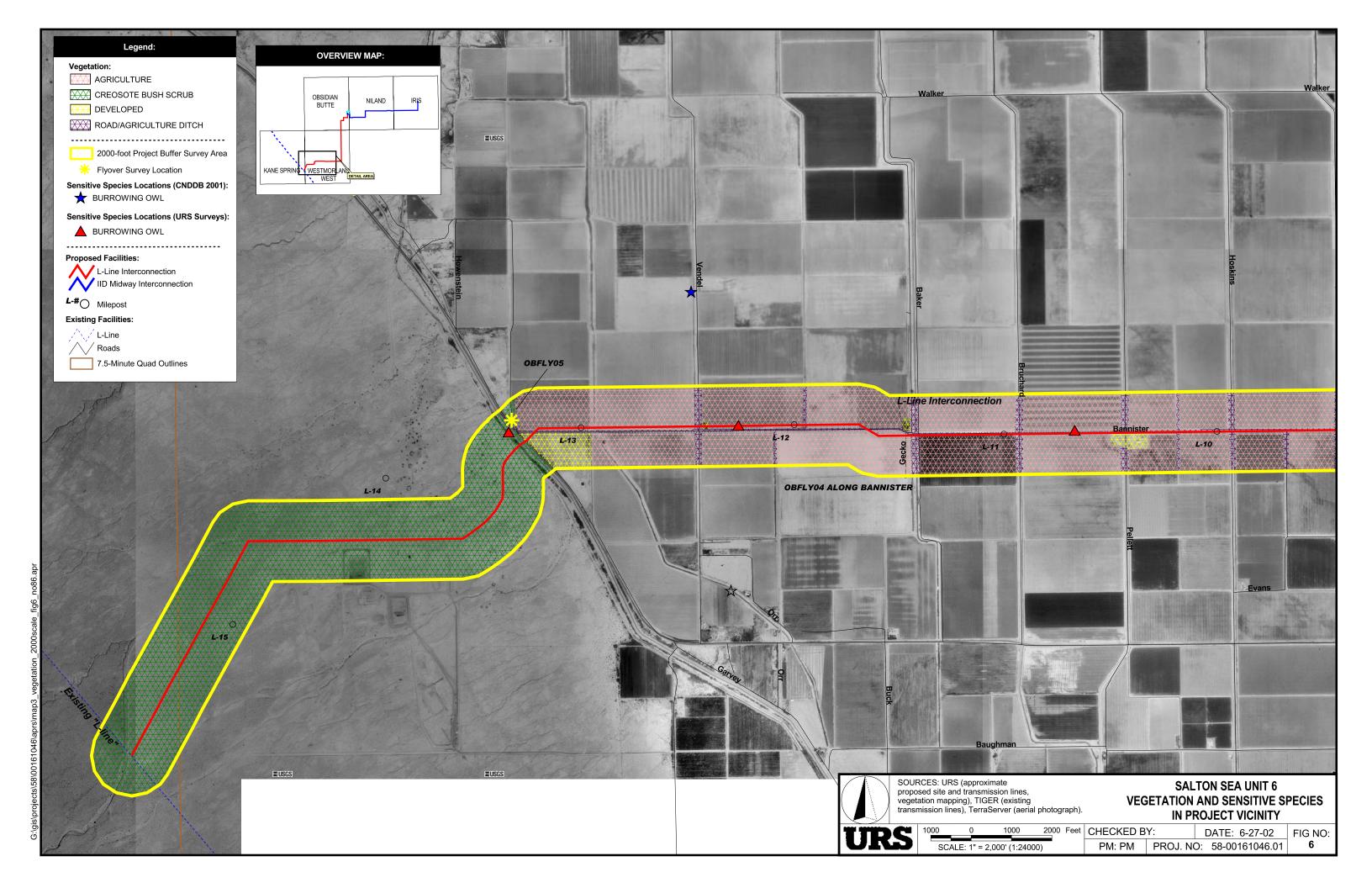




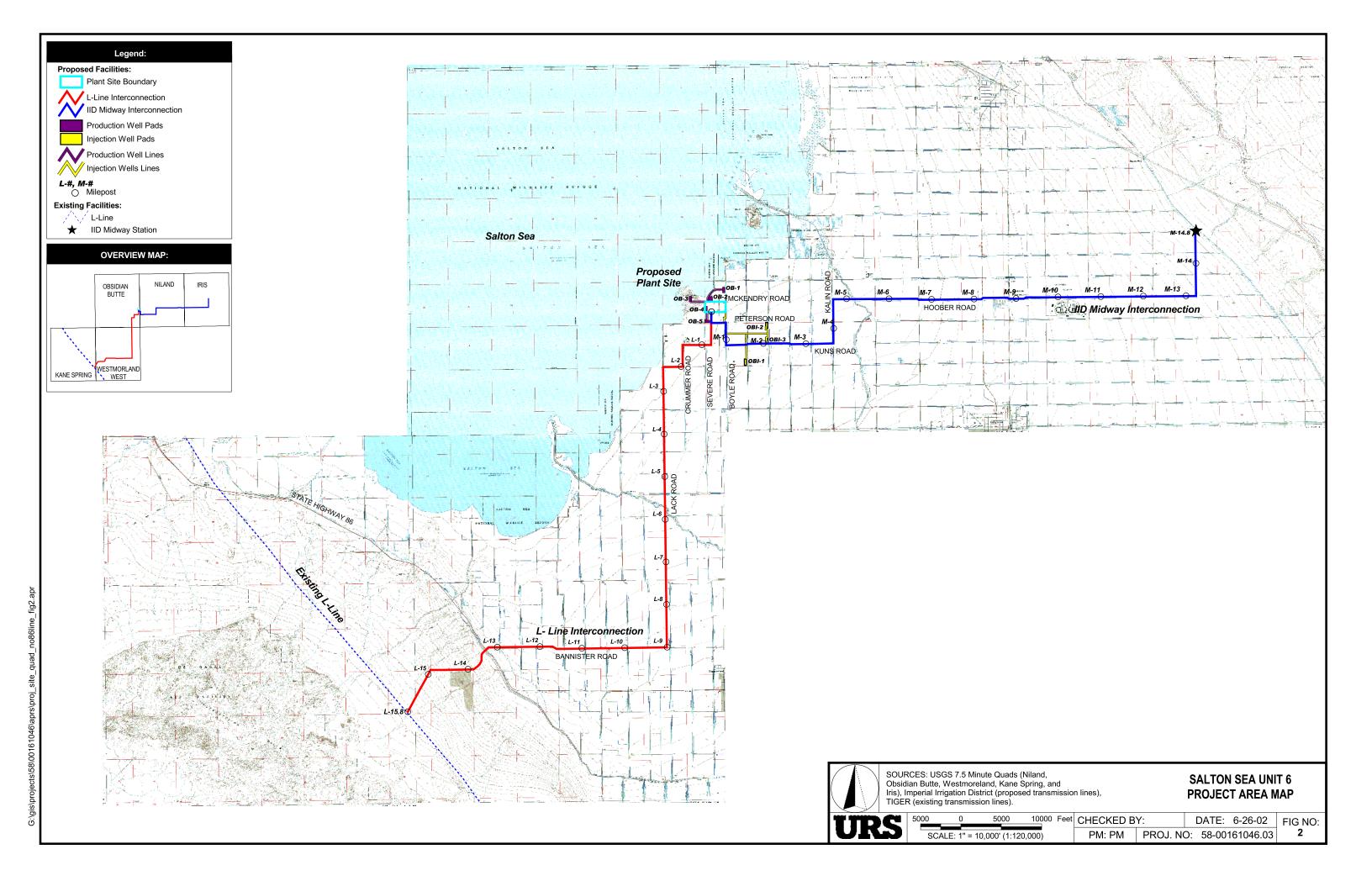


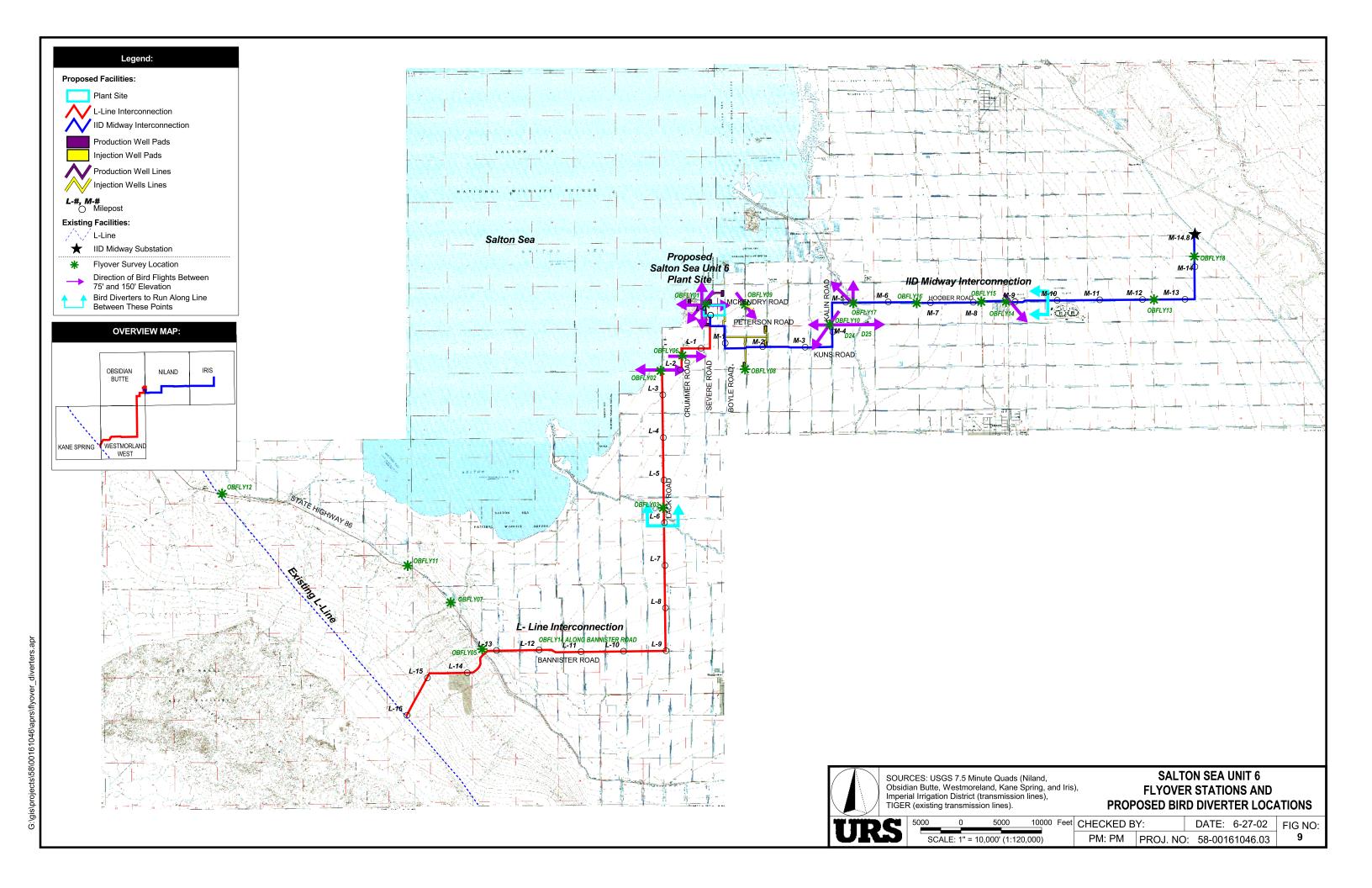
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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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		Bas	ased on Direction and Elevation	and Elevation	ũ L	Page 1 of 66
Species Code Common Name	No. Observed	Habitat ed Scientific Name		Bird Type Comments	Status	
Station ID: BLM1		Direction: N/A	Elevation: N/A			
NONE	0			none	NONE	
none		none				
	- 0	- Total For BLM1 and N/A and	nd N/A			
Station ID: BLM2		Direction: N/A	Elevation: N/A			
NONE	0			попе	NONE	
none		попе				
	0	- Total For BLM2 and N/A and	nd N/A			
Station ID: D24		Direction: N-S	Elevation: H			
DC CO	9	AGR		water	SSC	
double-crested cormorant	ant	Phalacrocorax auritus				
I	- 9	- - Total For D24 and N-S and H	Н			
Station ID: D24		Direction: NW-SE	Elevation: H			
CA EG	7	AGR		shorebird	뒫	
cattle egret		Bubulcus ibis				
00 00	~	AGR		water	SSC	
double-crested cormorant	ant	Phalacrocorax auritus				
GULLS	10	AGR		shorebird	72	
sling		Larus spp.				
GULLS	40	AGR		shorebird	٦V	
gulls		Larus spp.				
GULLS	75	AGR		shorebird	N	
gulls		Larus spp.				
I	133	- Total For D24 and NW-SE and	H put			

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Dased OII DIFECTION AND ELEVATION	alla Elevation	
Species Code No. Habitat Common Name Observed Scientific Name	Bird Type Comments	Status
Station ID: D24 Direction: SE-NW Elevation: H		
AW PE 36 AGR American white pelican Pelecanus erythrorhynchos	water	- N
36 - Total For D24 and SE-NW and H		
Station ID: D24 Direction: W-E Elevation: M		
RW BL 100 AGR red-winged blackbird Agelaius phoeniceus	passerine	N
100 - Total For D24 and W-E and M		
Station ID: OBFLY01 Direction: Elevation:		
CL RA 2 AG/BUTTE/MARSH clanner rail Rathus fondinostris	water	THREATENED
Station ID: OBFLY01 Direction: Elevation: H		
GULLS 1 Larus spp.	shorebird	N
1 - Total For OBFLY01 and H		
Station ID: OBFLY01 Direction: CIRC Elevation: H		
FO TE 1 AG/BUTTE/MARSH Forster's tern Sterna forsteri	shorebird	SSC
1 - Total For OBFLY01 and CIRC and H		
Station ID: OBFLY01 Direction: E-SW Elevation: L		
DC CO 1 AG/BUTTE/MARSH double-crested cormorant Phalacrocorax auritus	water	SSC
1 - Total For OBFLY01 and E-SW and L		

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Species Code P Common Name Obs	No. Observed	Habitat Scientific Name		Bird Type Comments	Stafus
Station ID: OBFLY01	۵	Direction: E-W	Elevation: H		
DC CO double-crested cormorant	<b>-</b>	AG/BUTTE/MARSH Phalacrocorax auritus		water	SSC
DC CO double-crested cormorant	4	AG/BUTTE/MARSH Phalacrocorax auritus		water	SSC
	5 - 7	- Total For OBFLY01 and E-W and H	and H		
Station ID: OBFLY01	Δ	Direction: E-W	Elevation: L		
BN ST black-necked stilt	_	AG/BUTTE/MARSH Himantopus mexicanus		shorebird	TV
DC CO double-crested cormorant	_	AG/BUTTE/MARSH Phalacrocorax auritus		water	SSC
GR HE green heron	~	AG/BUTTE/MARSH Butorides virescens		shorebird	٦
KILL killdeer	4	AG/BUTTE/MARSH Charadrius vociferus		shorebird	Z
TERN tern	_	AG/BUTTE/MARSH Stema spp.		shorebird	NL
	8 - 1	Total For OBFLY01 and E-W	and L		
Station ID: OBFLY01	۵	Direction: E-W	Elevation: M		
BN ST black-necked stilt	_	AG/BUTTE/MARSH Himantopus mexicanus		shorebird	NL
CA EG cattle egret	-	AG/BUTTE/MARSH Bubulcus ibis		shorebird	NL
	2 - 7	- Total For OBFLY01 and E-W and M	and M		

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

Page 4 of 66 **Based on Direction and Elevation** 

	Í				•
Species Code No. Common Name Observed	o. Habitat erved Scientific Name		Bird Type Comments	Status	
Station ID: OBFLY01	Direction: N - S	Elevation: H			
WF IB 4	, AG/BUTTE/MARSH Plegadis chihi		shorebird	SSC	
7	4 - Total For OBFLY01 and N -	- S and H			
Station ID: OBFLY01	Direction: N - S	Elevation: L			
BC NH black crowned night-heron	AG/BUTTE/MARSH Nycticorax nycticorax		shorebird	SENS	
DC CO 2	AG/BUTTE/MARSH Phalacrocorax aurifus		water	SSC	
DC CO 3 double-crested cormorant	AG/BUTTE/MARSH Phalacrocorax auritus		water	SSC	
	6 - Total For OBFLY01 and N - S	S and L			
Station ID: OBFLY01	Direction: N - S	Elevation: M			
CA EG cattle egret	AG/BUTTE/MARSH Bubulcus ibis		shorebird	N	
\ \frac{\sigma}{-}	1 - Total For OBFLY01 and N -	-Sand M			
Station ID: OBFLY01	Direction: N - W	Elevation: L			
DC CO 2 double-crested cormorant	AG/BUTTE/MARSH Phalacrocorax auritus		water	SSC	
FO TE Forster's tern	AG/BUTTE/MARSH Stema forsteri		shorebird	SSC	
	3 - Total For OBFLY01 and N - W	W and L			

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Common Name Obs	Observed	Scientific Name	lame		Comments	en mo
Station ID: OBFLY01	Din	Direction: N-S	6	Elevation: H		
AW PE	, ,	AG/BUTTE/MARSH	RSH		water	NL
American white pelican		Pelecanus erythrorhynchos	throrhynchos			
BL TE	2	AG/BUTTE/MARSH	RSH		shorebird	ī
black tern		Chlidonias niger	jer			
CAEG	m	AG/BUTTE/MARSH	RSH		shorebird	¬N
cattle egret		Bubulcus ibis				
CA EG	4	AG/BUTTE/MARSH	RSH		shorebird	¥
cattle egret		Bubulcus ibis				
00 00	_	AG/BUTTE/MARSH	RSH		water	SSC
double-crested cormorant		Phalacrocorax auritus	c auritus			
WF IB	۳	AG/BUTTE/MARSH	RSH		shorebird	SSC
white-faced ibis		Plegadis chihi				
	21 - Te	Total For OBFLY01 and N-S and H	01 and N-S a	ınd H		
Station ID: OBFLY01	Ϊ́Θ	Direction: N-S	•	Elevation: L		
BCNH	_	AG/BUTTE/MARSH	RSH		shorebird	SENS
black crowned night-heron		Nycticorax nycticorax	cticorax			
BC NH	_	AG/BUTTE/MARSH	RSH		shorebird	SENS
black crowned night-heron		Nycticorax nycticorax	cticorax			
BCNH	2	AG/BUTTE/MARSH	RSH		shorebird	SENS
black crowned night-heron		Nycticorax nycticorax	cticorax			
BL TE	2	AG/BUTTE/MARSH	RSH		shorebird	TV
black tern		Chlidonias niger	jer			
BNST	2	AG/BUTTE/MARSH	RSH		shorebird	¥
black-necked stilt		Himantopus mexicanus	nexicanus			
CORM	_	AG/BUTTE/MARSH	RSH		water	뉟
cormorant		Phalacrocorax spp.	ς spp.			
0000	_	AG/BUTTE/MARSH	RSH		water	SSC
double-crested cormorant		Phalacrocorax auritus	carritus /			

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Species Code Common Name O	No. Observed	Habitat ved Scientific Name		Bird Type Comments	Status
Station ID: OBFLY01	_	Direction: N-S	Elevation: L		
DC CO double-crested cormorant	7	AG/BUTTE/MARSH Phalacrocorax auritus		water	SSC
DC CO double-crested cormorant	ابر س	AG/BUTTE/MARSH Phalacrocorax auritus		water	SSC
DC CO double-crested cormorant	بر س	AG/BUTTE/MARSH Phalacrocorax auritus		water	SSC
GR EG great egret	-	AG/BUTTE/MARSH Casmerodius albus		shorebird	¥
GULLS	-	Larus spp.		shorebird	N
KILL killdeer	-	AG/BUTTE/MARSH Charadrius vociferus		shorebird	NL
RB GU ring-billed gull	-	Larus delawarensis		shorebird	٦
RB GU ring-billed gull	ю	Larus delawarensis		shorebird	N
WF IB white-faced ibis	22	AG/BUTTE/MARSH Plegadis chihi		shorebird	ssc
	47	<ul> <li>Total For OBFLY01 and N-S a</li> </ul>	and L		
Station ID: OBFLY01	_	Direction: N-S	Elevation: M		
BN ST black-necked stilt	-	AG/BUTTE/MARSH Himantopus mexicanus		shorebird	N.
CA EG cattle egret	-	AG/BUTTE/MARSH Bubulcus ibis		shorebird	NL
CA EG cattle egret	-	AG/BUTTE/MARSH Bubulcus ibis		shorebird	NL
CAEG	ო	AG/BUTTE/MARSH		shorebird	TZ

Notes: "NR" = not recorded

Bubulcus ibis

cattle egret

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Station ID: OBFLY01	Observed Scientific Name		Comments	
	Direction: N-S	Elevation: M		
CORM 3	AG/BUTTE/MARSH		water	¥
cormorant	Phalacrocorax spp.			
DC CO 1			water	SSC
double-crested cormorant	Phalacrocorax auritus			
0000	AG/BUTTE/MARSH		water	SSC
double-crested cormorant	Phalacrocorax auritus			
0000	AG/BUTTE/MARSH		water	SSC
double-crested cormorant	Phalacrocorax aurifus			
DC CO 16	AG/BUTTE/MARSH		water	SSC
double-crested cormorant	Phalacrocorax auritus			
FO TE 1	AG/BUTTE/MARSH		shorebird	SSC
Forster's tern	Sterna forsteri			
GULLS 2			shorebird	N.
gulls	Larus spp.			
WF IB 1	AG/BUTTE/MARSH		shorebird	SSC
white-faced ibis	Plegadis chihi			
WF IB 22	AG/BUTTE/MARSH		shorebird	SSC
white-faced ibis	Plegadis chihi			
54	<ul><li>Total For OBFLY01 and N-S and M</li></ul>	and M		
Station ID: OBFLY01	Direction: NE-SW	Elevation: H		
SN GO 11	AG/BUTTE/MARSH Chen caerulescens		shorebird	7
11	- Total For OBFLY01 and NE-SW and H	-SW and H		
Station ID: OBFLY01	Direction: NE-SW	Elevation: L		
FO TE 1	AG/BUTTE/MARSH Sterna forsteri		shorebird	SSC

### Total Number of Birds Observed In Each Station **Based on Direction and Elevation**

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Species Code Nome Obs	No. Habitat Observed Scientific Name		Bird Type Comments	Status
	1 - Total For OBFLY01 and NE-SW and L	-SW and L		
Station ID: OBFLY01	Direction: NE-SW	Elevation: M		
AW PE 58	B AG/BUTTE/MARSH		water	₩.
American white pelican	Pelecanus erythrorhynchos	108		
0000	2 AG/BUTTE/MARSH		water	ssc
double-crested cormorant	Phalacrocorax auritus			
WF IB 55	5 AG/BUTTE/MARSH		shorebird	SSC
white-faced ibis	Plegadis chihi			
115	5 - Total For OBFLY01 and NE-SW and M	-SW and M		
Station ID: OBFLY01	Direction: NW-SE	Elevation: H		
WF IB 15 white-faced ibis	5 AG/BUTTE/MARSH Pleaadis chihi		shorebird	SSC
	15 - Total For OBFLY01 and NW-SE and H	-SE and H		
Station ID: OBFLY01	Direction: NW-SE	Elevation: L		
GB HE great blue heron	1 AG/BUTTE/MARSH Ardea herodias		shorebird	SENS
	1 - Total For OBFLY01 and NW-SE and L	-SE and L		
Station ID: OBFLY01	Direction: S-N	Elevation: H		
	1 AG/BUTTE/MARSH		shorebird	SSC
Forster's tern	Sterna forsteri			
NOP	1 AG/BUTTE/MARSH		water	
northern pintail	Anas acufa			
	2 - Total For OBFLY01 and S - N	N and H		

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Species Code Common Name Obs	No. Observed	Habitat d Scientific Name		Bird Type Comments	Status
Station ID: OBFLY01		Direction: S - N	Elevation: M		
CA EG cattle egret	_	AG/BUTTE/N/ARSH Bubulcus ibis		shorebird	N
DC CO double-crested cormorant	2	AG/BUTTE/MARSH Phalacrocorax auritus		water	SSC
	3	- Total For OBFLY01 and S - N	N and M		
Station ID: OBFLY01		Direction: S-N	Elevation: H		
BL TE black tern	မှ	AG/BUTTE/MARSH Chlidonias niger		shorebird	N
GULLS gulls	7	Larus spp.		shorebird	¥
BONTS B	06	Larus spp.		shorebird	7
	88	Total For OBFLY01 and S-N a	and H		
Station ID: OBFLY01		Direction: S-N	Elevation: L		
BL TE black tern	2	AG/BUTTE/MARSH Chlidonias niger		shorebird	Z
BN ST black-necked stilt	<b>~</b>	AG/BUTTE/MARSH Himanfopus mexicanus		shorebird	7
CA EG cattle egret	2	AG/BUTTE/MARSH Bubulcus ibis		shorebird	Z
CA EG cattle egret	2	AG/BUTTE/MARSH Bubulcus ibis		shorebird	Z
CORM cormorant	_	AG/BUTTE/MARSH Phalacrocorax spp.		water	Z
DC CO	-	AG/BUTTE/MARSH		water	SSC
double-clested comporant		Filaraci ocurax aumus			

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Station ID: OBFLY01  DC CO  double-crested cormorant  DC CO  double-crested cormorant  DC CO  double-crested cormorant  DC CO  2  Phalacr  DC CO  AG/BUT	N			
1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N-0	Elevation: L		
2 ble-crested cormorant 2	AG/BUTTE/MARSH Phalacrocorax auritus		water	SSC
2 sle-crested cormorant	Phalacrocorax auritus		water	SSC
	AG/BUTTE/MARSH Phalacrocorax auritus		water	OSS
FOTE 1 A	AG/BUTTE/MARSH Sterna forsteri		shorebird	SSC
FO TE 2 A	AG/BUTTE/MARSH Sterna forsteri		shorebird	SSC
RB GU 2 Li ring-billed gull	Larus delawarensis		shorebird	N
TERN 1 A	AG/BUTTE/MARSH Stema spp.		shorebird	N
TERN 2 A	AG/BUTTE/MARSH Sfema spp.		shorebird	٦
	- Total For OBFLY01 and S-N and L			
Station ID: OBFLY01 Direct	Direction: S-N	Elevation: M		
AW PE 1 American white pelican P	Pelecanus erythrorhynchos		water	N
CORM 20 A cormorant P	AG/BUTTE/MARSH Phalacrocorax spp.		water	٦
DC CO 1 A double-crested cormorant P	AG/BUTTE/MARSH Phalacrocorax auritus		water	SSC
GULLS 1 Light	Larus spp.		shorebird	N
GULLS 6	Larus spp.		shorebird	N

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Species Code Common Name O	No. Observed	Habitat   Scientific Name		Bird Type Comments	Status
Station ID: OBFLY01		Direction: S-N	Elevation: M		
GULLS	15			shorebird	N
sling		Larus spp.			
LBCU	ıç.	AG/BUTTE/MARSH		shorebird	
long-billed curlew		Numenius americanus			
RBGU	r2			shorebird	7
ling bellid-guir		Larus delawarensis			
Reco	10			shorebird	뉟
ring-billed gull		Larus delawarensis			
	64 - 1	- Total For OBFLY01 and S-N and M	N and M		
Station ID: OBFLY01		Direction: S-NE	Elevation: L		
TERN tern	-	AG/BUTTE/MARSH Sterna spp.		shorebird	N.
	-  -	- Total For OBFLY01 and S-NE	VE and L		
Station ID: OBFLY01		Direction: S-W	Elevation: L		
DC CO double-crested cormorant	-	AG/BUTTE/MARSH Phalacrocorax auritus		water	SSC
	1 - 1	- - Total For OBFLY01 and S-W and L	W and L		
Station ID: OBFLY01		Direction: SW - NE	Elevation: H		
CA EG cattle egret	က	AG/BUTTE/MARSH Bubulcus ibis		shorebird	Z
	3 - 1	- Total For OBFLY01 and SW -	/-NE and H		

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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	Scientific Name		Comments	
Station ID: OBFLY01 Dire	Direction: SW - NE	Elevation: L		
2	AG/BUTTE/MARSH Casmerodius albus		shorebird	TV
2 - To	- Total For OBFLY01 and SW -	- NE and L		
Station ID: OBFLY01 Dir	Direction: SW - NE	Elevation: M		
-	AG/BUTTE/MARSH Casmerodius albus		shorebird	TZ
1 - To	- Total For OBFLY01 and SW - I	- NE and M		
OBFLY01 Dir	Direction: SW-NE	Elevation: H		
) GO 25 Ross's goose	AG/BUTTE/MARSH Chen rossii		water	TZ
4 GO 2 snow goose	AG/BUTTE/MARSH Chen caerulescens		shorebird	٦
F IB 6 white-faced ibis	AG/BUTTE/MARSH Plegadis chihi		shorebird	ssc
33 - To	- Total For OBFLY01 and SW-N	NE and H		
Station ID: OBFLY01 Dir	Direction: SW-NE	Elevation: L		
5 CO 1 double-crested cormorant	Phalacrocorax auritus		water	ssc
1 - To	- Total For OBFLY01 and SW-N	NE and L		
Station ID: OBFLY01 Dir	Direction: W - E	Elevation: M		
A EG 1 cattle egret	AG/BUTTE/MARSH Bubulcus ibis		shorebird	TV.
	Total For OBFLY01 and W - E	E and M		

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Species Code Common Name Ob	No. Observed	Habitat Scientific Name		Bird Type Comments	Status
Station ID: OBFLY01		Direction: W-E	Elevation: H		
CORM cormorant	2	AG/BUTTE/NARSH Phalacrocorax spp.		water	TV
GULLS	<b>~</b>	Larus spp.		shorebird	TV
GULLS	ო	Larus spp.		shorebird	T
RB GU ring-billed gull	2	Larus delawarensis		shorebird	N
	8 - 7	Total For OBFLY01 and W-E	and H		
Station ID: OBFLY01		Direction: W-E	Elevation: L		
BN ST black-necked stilt	-	AG/BUTTE/MARSH Himantopus mexicanus		shorebird	뉟
BN ST black-necked stilt	m	AG/BUTTE/MARSH Himantopus mexicanus		shorebird	Z
GB HE great blue heron	_	AG/MARSH Ardea herodias		shorebird	SENS
GULLS GUILS	m	Larus spp.		shorebird	TV
GULLS gulls	4	Larus spp.		shorebird	TZ
GULLS gulls	<b>6</b>	Larus spp.		shorebird	Z
GULLS gulls	22	Larus spp.		shorebird	TV.
	43 - T	Total For OBFLY01 and W-E and L	≣ and L		

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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					)
Species Code Common Name Ob	No. Ha Observed Sci	Habitat Scientific Name		Bird Type Comments	Status
Station ID: OBFLY01	1 Direction:	on: W-E	Elevation: M		
GULLS	<b>←</b>			shorebird	NL
gulls	Lar	Larus spp.			
GULLS	3			shorebird	N
gulls	Lar	Larus spp.			
GULLS	9			shorebird	
gulls	Lar	Larus spp.			
GULLS	7			shorebird	₹
gulls	Lar	Larus spp.			
GULLS	8			shorebird	N
sling	Lar	Larus spp.			
GULLS	38			shorebird	Z
gulls	Lar	Larus spp.			
GULLS	45			shorebird	
gulls	Lar	Larus spp.			
RB GU	2			shorebird	7
ring-billed gull		Larus delawarensis			
	110 - Total F	- Total For OBFLY01 and W-E and M	and M		
Station ID: OBFLY01	1 Direction:	on: W-N	Elevation: M		
DC CO double-crested comorant	-	AG/BUTTE/MARSH Phalacrocorax auritus		water	SSC
	1 - Total F	- Total For OBFLY01 and W-N and M	and M		
Station ID: OBFLY02	2 Direction:	on: E-W	Elevation: H		
DC CO	1 OW	OW/AG		water	SSC
double-crested cormorant		Phalacrocorax auritus			
	1 - Total F	- Total For OBFLY02 and E-W and H	and H		

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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BC NH         1         OW/IAG         Elevation           BC NH         1         OW/IAG         Elevation           BN ST         2         AGMARSH/IDIST         AGMARSH/IDIST           BN ST         3         OW/IAG         AGMARSH/IDIST           SN EG         3         OW/IAG         AGMARSH/IDIST           SN EG         3         OW/IAG         AGMARSH/IDIST           TERN         1         OW/IAG         Amand           Station ID: OBFLY02         Direction: E-W         Elevation:           BL TE         10         AGMARSH/IDIST         AGMARSH/IDIST           CA EG         2         AGMARSH/IDIST         AGMARSH/IDIST           CA EG         2         AGMARSH/IDIST         AGMARSH/IDIST           CA EG         3         AGMARSH/IDIST         AGMARSH/IDIST           CA EG         3         AGMARSH/IDIST         AGMARSH/IDIST           CA EG         4         AGMARSH/IDIST         AGMARSH/IDIST           CALL         Bubulucus ibis         Bubulucus ibis         AGMARSH/IDIST           CACA EG         2         AGMARSH/IDIST         AGMARSH/IDIST           DCCO         3         AGMARSH/IDIST         AGMARSH/IDIST	shorebird shorebird shorebird shorebird shorebird shorebird shorebird shorebird	SENS N
1 OW/AG Nycticorax nycticorax 2 AG/MARSH/DIST Himantopus mexicanus 3 OW/AG 1 OW/AG 5 Egretta thula 1 OW/AG 7 - Total For OBFLY02 and E-W an Direction: E-W 2 AG/MARSH/DIST Childonias niger 2 AG/MARSH/DIST Bubulcus ibis 12 - Total For OBFLY02 and E-W an Direction: N-S 2 OW/AG Phalacrocorax auritus 1 OW/AG		SENS NL NL
AGMARSHIDIST Himantopus mexicanus GWIAG DOWIAG Sterna spp. 7 - Total For OBFLY02 and E-W an Direction: E-W Direction: E-W Chidonias niger Chidonias niger AGMARSHIDIST Bubulcus ibis Direction: N-S Direction: N-S  OWIAG Phalacrocorax auritus Chidonias Control Chidon		N N N
2 AG/MARSH/DIST Himantopus mexicanus 3 OW/IAG 5 Egretta thula 1 OW/IAG Sfema spp. 7 - Total For OBFLY02 and E-W an Direction: E-W 10 AG/MARSH/DIST Childonias niger 2 AG/MARSH/DIST Bubulcus ibis 12 - Total For OBFLY02 and E-W an Direction: N-S 2 OW/IAG Phalacrocorax auritus 1 OW/IAG	Σ	N N
Himantopus mexicanus  COW/AG  COW/AG  Stema spp.  7 - Total For OBFLY02 and E-W an  Direction: E-W  10 AG/MARSH/DIST  Childonias niger  Childonias niger  AG/MARSH/DIST  Bubulcus ibis  Bubulcus ibis  Childonia niger  AG/MARSH/DIST  Bubulcus ibis  Phalacrocorax auritus  1 OW/AG  Phalacrocorax auritus  CHIMAGG  Phalacrocorax auritus		N N
3 OW/AG Egretta thula Series spp. 7 - Total For OBFLY02 and E-W an Direction: E-W  10 AG/MARSH/DIST Childonias niger Childonias niger Childonias niger Direction: N-S  2 OW/AG Phalacrocorax auritus 1 OW/AG	Σ	₩ ₩
Egretta thula  1 OW//AG  Sfema spp.  7 - Total For OBFLY02 and E-W an  Direction: E-W  10 AG//MARSH/DIST  Chitdonias niger  2 AG//MARSH/DIST  Bubulcus ibis  12 - Total For OBFLY02 and E-W an  Direction: N-S  2 OW//AG  Phalacrocorax auritus  1 OW//AG		₹
1 OW/AG Stema spp. 7 - Total For OBFLY02 and E-W an Direction: E-W 10 AG/MARSH/DIST Childonias niger 2 AG/MARSH/DIST Bubulcus ibis 12 - Total For OBFLY02 and E-W an Direction: N-S 2 OW/AG Phalacrocorax auritus 1 OW/AG	Σ	₹
Stema spp.  7 - Total For OBFLY02 and E-W an  Direction: E-W  10 AG/MARSH/DIST Childonias niger 2 AG/MARSH/DIST Bubulcus ibis 12 - Total For OBFLY02 and E-W an  Direction: N-S  2 OW/AG Phalacrocorax auritus 1 OW/AG	1 1	
7 - Total For OBFLY02 and E-W an  Direction: E-W  10 AG/MARSH/DIST  Chirdonias niger  2 AG/MARSH/DIST  Bubulcus ibis  12 - Total For OBFLY02 and E-W an  Direction: N-S  2 OW/AG  Phalacrocorax auritus  1 OW/AG  Common Control Control  Control  Control Control  Control	l I	2
Direction: E-W  10 AG/MARSH/DIST CHidonias niger 2 AG/MARSH/DIST Bubulcus ibis 12 - Total For OBFLY02 and E-W an  Direction: N-S 2 OW/AG Phalacrocorax auritus 1 OW/AG		2
10 AG/MARSH/DIST Childonias niger 2 AG/MARSH/DIST Bubulcus ibis 12 - Total For OBFLY02 and E-W an Direction: N-S 2 OW/AG Phalacrocorax auritus 1 OW/AG		= 2
2 AG/MARSH/DIST Bubulcus ibis 12 - Total For OBFLY02 and E-W and Direction: N-S 2 OW/AG Phalacrocorax auritus 1 OW/AG Control	shorebird	
2 AG/MARSH/DIST Bubulcus ibis 12 - Total For OBFLY02 and E-W am Direction: N-S 2 OW/AG Phalacrocorax auritus 1 OW/AG Control C		
Bubulcus ibis  12 - Total For OBFLY02 and E-W am  Direction: N-S  2 OW/AG Phalacrocorax auritus  1 OW/AG Control Contr	shorebird	¥
12 - Total For OBFLY02 and E-W am  Direction: N-S  2 OW/AG  Phalacrocorax auritus  1 OW/AG		
Direction: N-S  2 OW/AG Phalacrocorax auritus 1 OW/AG		
2 ole-crested cormorant	n: L	
ble-crested cormorant	water	SSC
- I		
	shorebird	SSC
GREG 1 OW/AG	shorebird	
great egret		
KILL 2 AG/MARSH/DIST	shorebird	V
killdeer Charadrius vociferus		
6 - Total For OBFLY02 and N-S and L		

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Species Code Na Common Name Obse	No. Habitat Observed Scientific Name		Bird Type Comments	Status
Station ID: OBFLY02	Direction: N-S	Elevation: M		
	1 AG/MARSH/DIST		shorebird	Z
Diack-Hecked suit	nimanopos mexicanos		paparahird	Z
f egret	Casmerodius albus			į
CULLS			shorebird	- N
gulls	Larus spp.			
	3 - Total For OBFLY02 and N-S and M	S and M		
Station ID: OBFLY02	Direction: NE-SW	Elevation: H		
SN GO OS NS	6 OW/AG Chen caerulescens		shorebird	Z
	6 - Total For OBFLY02 and NE-SW and H	-SW and H		
Station ID: OBFLY02	Direction: NE-SW	Elevation: L		
CA EG	2 AG/MARSH/DIST Rubulcus ibis		shorebird	<del>V</del>
	2 - Total For OBFLY02 and NE-SW and L	-SW and L		
Station ID: OBFLY02	Direction: NW-SE	Elevation: H		
BL TE black tern	1 AG/MARSH/DIST Chlidonias niger		shorebird	Z
	1 - Total For OBFLY02 and NW-S	4-SE and H		
Station ID: OBFLY02	Direction: NW-SE	Elevation: L		
GULLS gulls	1 Larus spp.		shorebird	Z
LB CU long-billed curlew	2 AG/MARSH/DIST Numenius americanus		shorebird	N.
5000				

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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	Species Code No. Common Name Observed	. Habitat rved Scientific Name		Bird Type Comments	Status
Direction: S-N         Elevation: L         shorebird           1         Larus spp.         shorebird           3         - Total For OBFLV02 and S-N and L         shorebird           2         AGMARSH/DIST         shorebird           2         - Total For OBFLV02 and S-N and M         shorebird           4         AGMARSH/DIST         shorebird           1         AGMARSH/DIST         shorebird           2         - Total For OBFLV02 and SW-NE and L         shorebird           2         - Total For OBFLV02 and SW-NE and L         shorebird           2         - Total For OBFLV02 and SW-NE and L         shorebird           4         AGMARSH/DIST         shorebird           5         - Total For OBFLV02 and SW-NE and L         shorebird	3		-SE and L		
2 AGIMARSH/DIST 3 - Total For OBFLY02 and S-N and L Direction: SF-NW Elevation: H Direction: SF-NW Elevation: H Direction: SW-NE Elevation: L Direction: SW-NE Elevation: Name shorebird Casharacdius anger Casharacd	Station ID: OBFLY02				
Larus spp.   Shorebird     Larus spp.   Shorebird     Direction: S-N   Elevation: M   Shorebird     Direction: SE-NW   Elevation: H   Shorebird     Charactius arbus   Charactius arbus     AGMARSH/DIST   Shorebird	egret	AG/MARSH/DIST Bubulcus ibis		shorebird	Z
2 - Total For OBFLY02 and S-N and L  Direction: S-N				shorebird	īZ
Direction: S-N Elevation: M shorebird Charachius vociferus  2			and L		
2 AGMARSH/DIST Charadrius vociferus 2 - Total For OBFLY02 and Sw-NE and M Direction: SE-NW Elevation: H AGMARSH/DIST Casmerodius abus 1 - Total For OBFLY02 and SE-NW and H Direction: SW-NE Elevation: L AGMARSH/DIST Childonias niger 1 AGMARSH/DIST Childonias niger 1 AGMARSH/DIST Childonias niger 2 - Total For OBFLY02 and Sw-NE and L Direction: SW-NE Elevation: M shorebird Larus spp.			evation:		
2 - Total For OBFLY02 and S-N and M         Direction: SE-NW Elevation: H       shorebird         1 - AGMARSH/DIST       shorebird         Direction: SW-NE Elevation: L       shorebird         1 - AGMARSH/DIST       shorebird         1 - AGMARSH/DIST       shorebird         1 - AGMARSH/DIST       shorebird         2 - Total For OBFLY02 and SW-NE and L       Binection: SW-NE Elevation: M         2 - Total For OBFLY02 and SW-NE Elevation: M       shorebird	qeer	AG/MARSH/DIST Charadrius vociferus		shorebird	- N
Direction: SE-NW Elevation: H shorebird shores after a shorebird shores.  1		II I	and M		
1 AGMARSH/DIST Casmerodius albus 1 - Total For OBFLY02 and SE-NW and H Direction: SW-NE Elevation: L Direction: SW-NE Elevation: L AGMARSH/DIST Childonias riger 1 AGMARSH/DIST Numerius americanus 2 - Total For OBFLY02 and SW-NE and L Direction: SW-NE Elevation: M  1 Larus spp.					
1 - Total For OBFLY02 and SE-NW and H         Direction:       SW-NE       Elevation:       Larus spp.         1 AG/MARSH/DIST       shorebird         2 - Total For OBFLY02 and SW-NE and L       Shorebird         1 Larus spp.       shorebird     Shorebird  Larus spp.	t egret	AG/MARSH/DIST Casmerodius albus		shorebird	N
Direction: SW-NE Elevation: L  AG/MARSH/DIST Childonias niger  A AG/MARSH/DIST ACMARRSH/DIST Numerius americanus  2 - Total For OBFLY02 and SW-NE and L Direction: SW-NE Elevation: M  Larus spp.	1	ll I	NW and H		
1 AG/MARSH/DIST Childonias niger 1 AG/MARSH/DIST Numerius americanus 2 - Total For OBFLY02 and SW-NE and L Direction: SW-NE Elevation: M  1 Larus spp.					
1 AGMARSH/DIST Numerius americanus 2 - Total For OBFLY02 and SW-NE and L  Direction: SW-NE Elevation: M  1	k tern	AG/MARSH/DIST Chlidonias niger		shorebird	Z
2 - Total For OBFLY02 and SW-NE and L  Direction: SW-NE Elevation: M  1 shorebird  Larus spp.	-billed curlew	AG/MARSH/DIST Numenius americanus		shorebird	NL
Direction: SW-NE Elevation: M  1 shorebird  Larus spp.		1 1	-NE and L		
shorebird Larus spp.	Station ID: OBFLY02				
		Larus spp.		shorebird	NL
	-	- Total For OBFLY02 and SW-NE and M	-NE and M		

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Station ID: OBFLY02         Direction: W-E         Elevation: Elevation:         H. Bits each of the property of	Common Name Observed	ved Scientific Name		Comments	
5         Lanus spp         raptor           1         OW/AG         raptor           6 - Total For OBFLY02 and W-E and Flegadis chihi         H         shorebird           1 - Total For OBFLY02 and W-E and H         AGMARSH/DIST         shorebird           2 - OW/AG         Water         Elevation: W-E         Recailed and Flegadis chihi           2 - OW/AG         Pelesanus enythrorhynchos         shorebird         shorebird           3 - AGMARSH/DIST         Shorebird         shorebird           3 - AGMARSH/DIST         Shorebird         shorebird           3 - AGMARSH/DIST         Shorebird         shorebird           2 - Larus spp.         Larus spp.         shorebird           3 - Larus spp.         shorebird         shorebird           4 - Larus spp.         shorebird         shorebird           5 - Larus spp.         shorebird         shorebird         shorebird	Station ID: OBFLY02		Elevation:		
Learus spp.         raptor           Pandion haliaetus         raptor           6 - Total For OBFLY02 and W-E and Televation: W-E         Elevation: H         shorebird           1 AGMARSH/DIST         shorebird         water           2 OW/AG         Water         letevation: L           2 OW/AG         water         shorebird           35 AGMARSH/DIST         shorebird           35 AGMARSH/DIST         shorebird           37 - Total For OBFLY02 and W-E and L         shorebird           2 Larus spp.         shorebird           3 Larus spp.         shorebird           3 Larus spp.         shorebird           4 Larus spp.         shorebird				shorebird	NL
1   OWI/AG     Pandion haleatus     6   Total For OBELV02 and W-E and     1   AG/MARSH/DIST   Shorebird     2   AG/MARSH/DIST   Shorebird     3   Larus spp.     3   Larus spp.     1   Pandion haleatus     2   Pandion we and H   Shorebird     3   Larus spp.     4   AG/MASH/DIST   Shorebird     5   Larus spp.   Shorebird     6   Total For OBELV02 and W-E and L   Shorebird     7   Total For OBELV02 and W-E and L   Shorebird     8   Larus spp.   Shorebird     9   Larus spp.   Shorebird     10   Larus spp.   Shorebird     11   Larus spp.   Shorebird     12   Larus spp.   Shorebird     13   Larus spp.   Shorebird     14   Larus spp.   Shorebird     15   Larus spp.   Shorebird     16   Larus spp.   Shorebird     17   Total For OBELV02 and W-E and M	sling	Larus spp.			
Pandion haliaetus           6 - Total For OBFLY02 and W-E and         Elevation: H         shorebird           1 AGMARSHDIST         shorebird           2 OW/AC         Elevation: L         water           2 OW/AC         Becanus erythrorhynchos         shorebird           35 AGMARSHDIST         shorebird           2 OW/AC         Elevation: M-E and L         shorebird           37 - Total For OBFLY02 and W-E and L         shorebird           2 Larus spp.         shorebird           3 Larus spp.         shorebird           412 Larus spp.         shorebird		OW/AG		raptor	SSC
6 - Total For OBFLY02 and W-E and           Direction: W-E         Elevation: H         shorebird           1	osprey	Pandion haliaetus			
Elevation: H         shorebird           AGMARSH/IDIST         shorebird           I - Total For OBFLY02 and W-E and H         Levation: L         water           Pelecanus erythrorhynchos         shorebird           35 AGMARSH/IDIST         shorebird           SAGMARSH/IDIST         shorebird           Shorebird           Shorebird           Shorebird           Tarus spp.         shorebird           12         Larus spp.           12         shorebird           Total For OBFLY02 and W-E and M-E and M           Total For OBFLY02 and W-E and M-E and M	9	<ul> <li>Total For OBFLY02 and W</li> </ul>	'-E and		
1 AGMARSHJDIST         shorebird           1 - Total For OBFLY02 and W-E and H         water           2 OWI/AG         Elevation: L         water           35 AGMARSH/DIST         shorebird           2 GWI/AG         Flegadis chihi         shorebird           37 - Total For OBFLY02 and W-E and L         AGMARSH/DIST           2 Larus spp.         shorebird           3 Larus spp.         shorebird           12 Larus spp.         shorebird					
Direction: W-E       Elevation: L       water         2       OVV/AG       water         2       OVV/AG       shorebird         35       AGIMARSHIDIST       shorebird         36       AGIMARSHIDIST       shorebird         37       - Total For OBFLY02 and W-E and L       shorebird         2       Larus spp.       shorebird         3       Larus spp.       shorebird         12       Larus spp.       shorebird	e-faced ibis	AG/MARSH/DIST Plegadis chihi		shorebird	SSC
Direction:         W-E         Elevation:         Larus spp.         water           2         OW/AG         water           35         AGMARSH/DIST         shorebird           36         AGMARSH/DIST         shorebird           37         - Total For OBFLY02 and W-E and L         shorebird           2         Larus spp.         shorebird           3         Larus spp.         shorebird           12         Larus spp.         shorebird           12         Larus spp.         shorebird           17         - Total For OBFLY02 and W-E and M         shorebird		- Total For OBFLY02 and W	-E and H		
2         OW/IAG         water           Seconds erythrorhynchos           35         AG/IMARSH/DIST         shorebird           37 - Total For OBFLY02 and W-E and L         Action Spiral         Shorebird           2         Larus spiral         shorebird           3         Larus spiral         shorebird           12         Larus spiral         shorebird           17         Total For OBFLY02 and W-E and M         shorebird			Elevation: L		
35AG/MARSH/DISTshorebirdPlegadis chihi37 - Total For OBFLY02 and W-E and LLarus spp.Shorebird3Larus spp.shorebird12Larus spp.shorebird12Larus spp.shorebird17Total For OBFLY02 and W-E and Mshorebird	rican white pelican	OW/AG Pelecanus erythrorhyno	hos	water	F
37 - Total For OBFLY02 and W-E and L       Direction: W-E     Elevation: M       2     Larus spp.     shorebird       3     Larus spp.     shorebird       12     Larus spp.     shorebird       17 - Total For OBFLY02 and W-E and M     shorebird	e-faced ibis	AG/MARSH/DIST Plegadis chihi		shorebird	SSC
Direction: W-E Elevation: M shorebird shore spp. 3 Larus spp. 47 - Total For OBFLY02 and W-E and M	37		4-E and L		
2 shorebird shorebird shorebird shorebird shore	Station ID: OBFLY02				
Larus spp.       shorebird         12       Larus spp.       shorebird         17       Total For OBFLY02 and W-E and M				shorebird	T/
3	gulls	Larus spp.			
Larus spp.  12 shorebird  Larus spp.  17 - Total For OBFLY02 and W-E and M				shorebird	¥
12 shorebird  Larus spp.  17 - Total For OBFLY02 and W-E and M	gulls	Larus spp.			
- 41				shorebird	¥
<b>'</b>	gulls	Larus spp.			
	17	ı <b>'</b>	'-E and M		

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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No. Habitat Served Scientific Name Direction: E-W  1 OW//AG Phalecrocorax auritus 1 - Total For OBFLY03 and E-W an Direction: E-W  2 AG/NEW RIVER XING Himantopus mexicanus 2 AG/NEW RIVER XING Sterna forsteri 3 - Total For OBFLY03 and E-W an Direction: N - S  2 AG/NEW RIVER CROSSING Bubulcus ibis 2 - Total For OBFLY03 and N - S ar Direction: N - S  1 AG/NEW RIVER CROSSING Circus cyaneus 1 - Total For OBFLY03 and N - S ar Direction: N - S  Direction: N - S  1 - Total For OBFLY03 and N - S ar Direction: N - S	Bird Type Status Comments	Elevation: H	water		Elevation: L	shorebird	shorebird SSC		Elevation: H	shorebird		Elevation: L	raptor	Elevation: H	Shorebird
	ed	E-W		1 - Total For OBFLY03 and E-W and H	E-W			ll l	N-S		ll l	N-S		N-S	1 AGNEW RIVER XING

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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AWK Enditor         Insection: N-S         Elevation: L         Figure         NL           AWK Enditor         1         AG         Page spawords         Insection         NL           CAREGIST         2         AG         AG         AG         AG           Quills         1         Larus spp.         Insection         AG         AG           Order Annaise         2         AG         AG         AG         AG           SNEG         3         AG         AG         AG         AG           SNEG         1         AG         AG         AG         AG           SNEG         2         AG         AG         AG         AG           SNEG         3         AG         AG         AG         AG           SNEG         3         AG         AG         AG         AG           SNEG         3         AG         AG         AG         AG         AG           SNEG         3         AG         AG	Species Code Common Name Ob	No. Observed	Habitat Scientific Name	Name		Bird Type Comments	Status	
2         AG         Febtor opparverlus           2         AG         Shoreblird           3         AG         Shoreblird           4         Larus spp.         raptor           2         AG         Shoreblird           4         Circus cyaneus         raptor           5         AG         Shoreblird           7         Total For OBFLY03 and N-S and L         shorebird           2         Casmerodius albus         shorebird           4         Larus spp.         shorebird           3         Total For OBFLY03 and N-S and M         mater           4         AGNEW RIVER XING         mone           5         Phalacrococax spp.         rotal For OBFLY03 and NESW and H           6         AGNEW RIVER XING         mone           9         AGNEW RIVER XING         none           10         AGNEW RIVER XING         none				S-				
2 AG Bubuicus fbis         shorebird           1 Larus spp.         raptor           2 AG Circus cyaneus         raptor           1 OWIAG Egretts thule         shorebird           7 - Total For OBFLY03 and N-S and L         shorebird           2 Casmerodius albus         shorebird           2 Casmerodius albus         shorebird           3 - Total For OBFLY03 and N-S and M         water           4 AGNEW RNER XING         water           4 AGNEW RNER XING         briedction: NONE           5 AGNEW RNER XING         elevation:           6 AGNEW RNER XING         briedction: NONE           7 - Total For OBFLY03 and NONE and         none           9 AGNEW RNER XING         none           1 - Total For OBFLY03 and NONE and         none	AM KE American kestrel	-	AG Falco sparve	erius		raptor	N	
Larus spp.   raptor   raptor     Circus cyaneus   Circus cyaneus     OWIAG	CA EG cattle egret	7	AG Bubulcus ibı	is		shorebird	Z	
2 AG         Circus cyaneus         shorebird           1 OW/AG         shorebird         shorebird           7 - Total For OBFLY03 and N-S and L         Shorebird         shorebird           2 Casmerodius albus         shorebird         shorebird           1 Larus spp.         shorebird         shorebird           3 - Total For OBFLY03 and N-S and M         water         haderocorax spp.           1 AGNEW RIVER XING         Elevation: H         water           1 - Total For OBFLY03 and NE-SW and H         none         none           1 - Total For OBFLY03 and NE-SW and H         none         none           0 AGNEW RIVER XING         none         none           1 - Total For OBFLY03 and NONE and         none         none	GULLS GULLS	-	Larus spp.			shorebird	Z	
1     OVV/AG       Egretta thula       T - Total For OBFLY03 and N-S and L       Shorebird       Shorebird       2     Casmerodius albus     shorebird       1     Larus spp.     shorebird       3     - Total For OBFLY03 and N-S and M     water       1     AGNEW RIVER XING     water       1     AGNEW RIVER XING     mone       0     AGNEW RIVER XING     lelevation:       0     AGNEW RIVER XING     none       0     AGNEW RIVER XING     none       0     Total For OBFLY03 and NONE and     none       0     Total For OBFLY03 and NONE and     none	NO HA northern harrier	2	AG Circus cyane	sne		raptor	SSC	
7 - Total For OBFLY03 and N-S and L       Birection: N-S     Elevation: M       2     Casmerodius albus       1     Larus spp       3 - Total For OBFLY03 and N-S and M     shorebird       1     AGNEW RIVER XING     Elevation: H       1     AGNEW RIVER XING     water       1     Fhalacrocorax spp.     none       0     AGNEW RIVER XING     none       0     AGNEW RIVER XING     none       0     Total For OBFLY03 and NONE and     none       0     Total For OBFLY03 and NONE and     none	SN EG snowy egret	-	OW/AG Egretta thula	es.		shorebird	NL	
Direction:         N-S         Elevation:         M         shorebird           1         Larus spp.         shorebird         shorebird           3 - Total For OBFLY03 and N-S and M         Levation:         H         AGNEW RIVER XING           1 - AGNEW RIVER XING         Elevation:         H         water           1 - Total For OBFLY03 and NE-SW and H         Elevation:         none           0 - AGNEW RIVER XING         Elevation:         none           0 - Total For OBFLY03 and NONE and         none         none           0 - Total For OBFLY03 and NONE and         none         none		1	otal For OBFL	Y03 and N-S	and L			
2 Casmerodius albus         shorebird           1         Larus spp         shorebird           3         - Total For OBFLY03 and N-S and M         Elevation: Howater           1         AGNEW RIVER XING         Levation: Howater         water           1         - Total For OBFLY03 and NE-SW and H         Innone         Innone         Innone           0         AGNEW RIVER XING         Innone         Innone         Innone           0         - Total For OBFLY03 and NONE and         Innone         Innone           0         - Total For OBFLY03 and NONE and         Innone         Innone <th c<="" th=""><th>Station ID: OBFLY03</th><th></th><th></th><th>တှ</th><th></th><th></th><th></th></th>	<th>Station ID: OBFLY03</th> <th></th> <th></th> <th>တှ</th> <th></th> <th></th> <th></th>	Station ID: OBFLY03			တှ			
1         Larus spp.         shorebird           3         - Total For OBFLY03 and N-S and M         Levation: H         water           1         AGNEW RIVER XING Phalacrocorax spp.         water         water           1         - Total For OBFLY03 and NE-SW and H         none         none           0         AGNEW RIVER XING none         rone         none           0         Total For OBFLY03 and NONE and         none	GR EG great egret	2	Casmerodiu	s albus		shorebird	Ź	
3 - Total For OBFLY03 and N-S and M         Direction:       NE-SW       Elevation:       Water         1 AGINEW RIVER XING       water       water         1 - Total For OBFLY03 and NE-SW and H       birection:       NONE       Elevation:         0 AGINEW RIVER XING       none       none         0 - Total For OBFLY03 and NONE and       none       none	GULLS gulls	-	Larus spp.			shorebird	NL	
Direction:         NE-SW         Elevation:         H           water         water         water           Phalacrocorax spp.         and NE-SW and H         none           Direction:         NONE         Elevation:           0         AGINEW RIVER XING         none           0         Total For OBFLY03 and NONE and         none		ı '	otal For OBFL	.Y03 and N-S	and M			
1 AGNEW RIVER XING Phalacrocorax spp. 1 - Total For OBFLY03 and NE-SW and H  OBFLY03 Direction: NONE Elevation: 0 AGNEW RIVER XING none 0 - Total For OBFLY03 and NONE and	Station ID: OBFLY03			E-SW	<b> </b>			
1 - Total For OBFLY03 and NE-SW and H  OBFLY03 Direction: NONE Elevation:  0 AGINEW RIVER XING  none  1 - Total For OBFLY03 and NONE and	CORM cormorant	-	AG/NEW RIV Phalacrocor	ER XING ax spp.		water	NL	
OBFLY03       Direction:       NONE       Elevation:         0       AGNEW RIVER XING       none         none       none         0       Total For OBFLY03 and NONE and			otal For OBFL	Y03 and NE-S	W and H			
e				ONE	Elevation:			
- Total For OBFLY03 and NONE	NONE none	0	AG/NEW RIV	ER XING		none	NONE	
		II I	otal For OBFL	Y03 and NON	E and			

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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CALEG         Intention: OBFLY03         Direction: NW-SE         Elevation: LAG           CAREG         1         ACONEW RIVER CROSSING         shorebird         NL           Castle egret         2         ACONEW RIVER CROSSING         shorebird         NL           Castle egret         20         ACONEW RIVER CROSSING         shorebird         NL           Castle egret         20         ACONEW RIVER CROSSING         shorebird         NL           Castle egret         5         ACONEW RIVER CROSSING         NL           LECU         1         Aconew River Crossing         NL           Lection: S - N         Intention: Brown River Crossing         NL           Lection: S - N         Aconew River Crossing         NL           Long Fundamins americanus         Aconew River Crossing         NL           Station ID: OBFLY03         Direction: S-N         Elevation: Hosping           Gulls         1         Larus spp.         NL           Gulls         1         Larus spp.	Species Code Common Name	No. Observed		Habitat Scientific Name		Bird Type Comments	Status
1         AGNEW RIVER CROSSING Bubuicus ibis         shorebird           20         AGNEW RIVER CROSSING Bubuicus ibis         shorebird           55         AGNEW RIVER CROSSING Bubuicus ibis         shorebird           55         AGNEW RIVER CROSSING Bubuicus ibis         shorebird           79 - Total For OBELY03 and NW-SE and L         shorebird           2 - Total For OBELY03 and S-N and H         shorebird           1 - Total For OBELY03 and S-N and H         shorebird           1 - Total For OBELY03 and S-N and H         shorebird           1 - Total For OBELY03 and S-N and H         shorebird           2 - Total For OBELY03 and S-N and H         shorebird           3 - Total For OBELY03 and S-N and M         shorebird	Station ID: OBFLY			NW-SE	Elevation: L		
Bubulcus lbis  AGNEW RIVER CROSSING Bubulcus lbis  AGNEW RIVER CROSSING Bubulcus lbis  AGNEW RIVER CROSSING Bubulcus lbis  Tg - Total For OBFLY03 and NW-SE and L  Direction: S-N Elevation: H  Direction: S-N and H  Direction: S-N and H  Direction: S-N Elevation: H  shorebird shorebird shorebird larus spp.  1 Larus spp.	CA EG	-	AG/NEW F	RIVER CROSSING		shorebird	뉟
3 AGNEW RIVER CROSSING         shorebird           20 AGNEW RIVER CROSSING         shorebird           55 AGNEW RIVER CROSSING         shorebird           55 AGNEW RIVER CROSSING         shorebird           79 - Total For OBFLY03 and NW-SE and L         shorebird           2 AGNEW RIVER CROSSING         shorebird           3 AGNEW RIVER CROSSING         shorebird           4 AGNEW RIVER CROSSING         shorebird           5 - Total For OBFLY03 and S - N and H         shorebird           4 Larus spp.         Elevation: M           7 - Total For OBFLY03 and S - N and H         shorebird           1 - Total For OBFLY03 and S - N and H         shorebird           1 - Larus spp.         Larus spp.	cattle egret		Bubulcus	s ibis			
Bubulcus lbis           5D         AGNEW RIVER CROSSING         shorebird           55         AGNEW RIVER CROSSING         shorebird           79 - Total For OBFLY03 and NW-SE and L         AGNEW RIVER CROSSING         AGNEW RIVER CROSSING           2 - AGNEW RIVER CROSSING         Blevation: H         Shorebird           2 - Total For OBFLY03 and S-N and H         Shorebird           1 - Total For OBFLY03 and S-N and H         Shorebird           1 - Total For OBFLY03 and S-N and H         Shorebird           1 - Total For OBFLY03 and S-N and H         Shorebird           1 - Total For OBFLY03 and S-N and H         Shorebird           1 - Larus Spp.         Aborebird           1 - Larus Spp.         Aborebird           1 - Total For OBFLY03 and S-N and M	CA EG	8	AG/NEW F	RIVER CROSSING		shorebird	N
20         AGNEW RIVER CROSSING Bubulcus ibis         shorebird           55         AGNEW RIVER CROSSING Bubulcus ibis         shorebird           79 - Total For OBFLY03 and NW-SE and L         H         shorebird           2         AGNEW RIVER CROSSING Numerius americanus         H         shorebird           2 - Total For OBFLY03 and S - N and H         Shorebird         shorebird           1 - Total For OBFLY03 and S - N and H         shorebird         shorebird           1 - Total For OBFLY03 and S - N and M         I - Total For OBFLY03 and S - N and M         I - Total For OBFLY03 and S - N and M	cattle egret		Bubulcus	s ibis			
Bubulcus ibis           55         AGNEW RIVER CROSSING Bubulcus ibis         shorebird           79 - Total For OBFLY03 and NW-SE and L         Abit of the complex of the compl	CAEG	20	AG/NEW F	RIVER CROSSING		shorebird	N
55 AGNEW RIVER CROSSING  Bubulcus ibis  79 - Total For OBFLY03 and NW-SE and L  Direction: S-N Elevation: H  Shorebird shorebird shored shore and H  Direction: S-N Elevation: H  Direction: S-N Elevation: H  Shorebird shorebird shored shored shore and H  1 Larus spp.	cattle egret		Bubulcus	s ibis			
Bubulcus ibis         2 AGNEW RIVER CROSSING       Elevation: H         Shorebird         2 AGNEW RIVER CROSSING       Shorebird         3 - Total For OBFLY03 and S-N and H       Shorebird         1 - Total For OBFLY03 and S-N and M       Shorebird         1 - Total For OBFLY03 and S-N and M       Shorebird	CAEG	55	AG/NEW I	RIVER CROSSING		shorebird	N
79 - Total For OBFLY03 and NW-SE and L         Direction: S-N       Elevation: H       shorebird         2 - Total For OBFLY03 and S-N and H       Shorebird         2 - Total For OBFLY03 and S-N and H       Shorebird         1 - Larus spp.       Larus spp.         1 - Total For OBFLY03 and S-N and H       Shorebird         1 - Total For OBFLY03 and S-N and M       Shorebird         1 - Total For OBFLY03 and S-N and M       Shorebird         1 - Total For OBFLY03 and S-N and M       Shorebird	cattle egret		Bubulcus	sidi s			
Direction:         S-N         Elevation:         H           2 AGNEW RIVER CROSSING	l		Fotal For OB		E and L		
2 AGNEW RIVER CROSSING  Numerius americanus  2 - Total For OBFLY03 and S-N and H  Direction: S-N  Larus spp.  1 - Total For OBFLY03 and S-N and H  Direction: S-N  Elevation: M  shorebird  shorebird  1 - Total For OBFLY03 and S-N and H  1 - Total For OBFLY03 and S-N and M  1 - Total For OBFLY03 and S-N and M	Station ID: OBFLY			S-N			
2 - Total For OBFLY03 and S-N and H           Direction:         S-N         Elevation:         H           shorebird         1 - Total For OBFLY03 and S-N and H         A         Shorebird           birection:         S-N         Elevation:         M           1 - Larus spp.         Larus spp.         shorebird           1 - Total For OBFLY03 and S-N and M         Total For OBFLY03 and S-N and M	LB CU long-billed curlew	2	AGNEW I Numenius	RIVER CROSSING s americanus		shorebird	N
Direction: S-N         Elevation: H         shorebird           1         Larus spp.         A shorebird           1 - Total For OBFLY03 and S-N and H         Bevation: M         A shorebird           1         Larus spp.         A shorebird           1         - Total For OBFLY03 and S-N and M         A shorebird	•	I <b>I</b> I	Total For OB	FLY03 and S - N a	and H		
1 Larus spp. 1 - Total For OBFLY03 and S-N and H OBFLY03 Direction: S-N Elevation: M shorebird  1 Larus spp. 1 Larus spp. 1 - Total For OBFLY03 and S-N and M	Station ID: OBFLY			N-S	Elevation: H		
Lerus spp.  1 - Total For OBFLY03 and S-N and H  OBFLY03 Direction: S-N Elevation: M  1 Larus spp. 1 - Total For OBFLY03 and S-N and M	GULLS	-				shorebird	7
1 - Total For OBFLY03 and S-N and H  OBFLY03 Direction: S-N Elevation: M  1 Larus spp. 1 - Total For OBFLY03 and S-N and M	sling		Larus spt				
OBFLY03 Direction: S-N Elevation: M shorebird  1 Larus spp. 1 - Total For OBFLY03 and S-N and M			Total For OB	FLY03 and S-N a	H pu		
shorebird  Larus spp.  1 - Total For OBFLY03 and S-N and M	Station ID: OBFLY			N-S			
	GULLS	-				shorebird	¥
I	sling		Larus spt	7.			
		ı	Total For OB	FLY03 and S-N ai	nd M		

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Common Name Ob	Observed Scientific Name		Comments	canno.
Station ID: OBFLY03	Direction: SE-NW	Elevation: H		
CA EG cattle egret	4 AGNEW RIVER XING Bubulcus ibis		shorebird	NL
	4 - Total For OBFLY03 and SE-NW and H	E-NW and H		
Station ID: OBFLY03	Direction: SE-NW	Elevation: M		
WF IB white-faced ibis	1 AGNEW RIVER CROSSING Plegadis chihi	ING	shorebird	SSC
	1 - Total For OBFLY03 and SE-NW and M	E-NW and M		
Station ID: OBFLY03	Direction: W - E	Elevation: H		
BR PE brown pelican	8 AGNEW RIVER CROSSING Pelecanus occidentalis	ING	water	ENDANG
	8 - Total For OBFLY03 and W - E	/ - E and H		
Station ID: OBFLY03	Direction: W - E	Elevation: L		
KILL killdeer	1 AGNEW RIVER CROSSING Charadrius vociferus	ING	shorebird	NL
	1 - Total For OBFLY03 and W	/-EandL		
Station ID: OBFLY03	Direction: W-E	Elevation: H		
BNST	1 AGNEW RIVER XING		shorebird	Ą
black-necked stilt	Himantopus mexicanus			
CA EG	8 AGNEW RIVER XING Bubuleus ibis		shorebird	TN
SNEG	2 AGNEW RIVER XING		shorebird	N
Sliowy egret			bridge	= 2
wy egret	14 AGINEW RIVER AING Egretta thula		STOREDITO	

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Species Code N Common Name Obs	No. Habitat Observed Scientific Name		Bird Type Comments	Status
2	25 - Total For OBFLY03 and W-E and H	and H		
Station ID: OBFLY03	Direction: W-E	Elevation: L		
CA EG cattle egret	8 AGNEW RIVER CROSSING Bubulcus ibis	(h	shorebird	N
GR HE green heron	1 AGNEW RIVER XING Butorides virescens		shorebird	N
GR HE green heron	2 AGNEW RIVER XING Buforides virescens		shorebird	TV.
GULLS Gulls	2 Larus spp.		shorebird	NL
1	13 - Total For OBFLY03 and W-E and L	and L		
Station ID: OBFLY03	Direction: W-E	Elevation: M		
BN ST black-necked stilt	2 AGINEW RIVER XING Himantopus mexicanus		shorebird	NL
DC CO double-crested cormorant	2 Phalacrocorax auritus		water	SSC
GULLS GUILS	1 Larus spp.		shorebird	TV
SN EG snowy egret	1 AGNEW RIVER XING Egretta thula		shorebird	NL
	6 - Total For OBFLY03 and W-E and M	and M		
Station ID: OBFLY04	Direction:	Elevation:		
NONE	D AG/BANNISTER RD none		none	NONE
NONE none	0 AG/BANNISTER RD none		none	NONE

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Species Code Common Name Obs	No. Habitat Observed Scientific Name		Bird Lype Comments	Status
Station ID: OBFLY04	Direction:	Elevation:		
NONE none	0 AG/BANNISTER RD none		none	NONE
	0 - Total For OBFLY04 and and	pu		
Station ID: OBFLY04	Direction: E-W	Elevation: H		
CA EG 40 cattle egret	9 AG/BANNISTER Bubulcus ibis		shorebird	NL
4	40 - Total For OBFLY04 and E - W	- W and H		
Station ID: OBFLY04	Direction: E-W	Elevation: M		
CA EG cattle egret	1 AG/BANNISTER Bubulcus ibis		shorebird	NL
	1 - Total For OBFLY04 and E - W	- W and M		
Station ID: OBFLY04	Direction: E-W	Elevation: H		
LB CU long-billed curlew	1 AG/BANNISTER RD Numenius americanus		shorebird	NL
	1 - Total For OBFLY04 and E-W and H	W and H		
Station ID: OBFLY04	Direction: E-W	Elevation: L		
NO HA northern harrier	1 AG/BANNISTER RD Circus cyaneus		raptor	SSC
	1 - Total For OBFLY04 and E-W	W and L		
Station ID: OBFLY04	Direction: E-W	Elevation: M		
LB CU long-billed curlew	6 AG/BANNISTER Numenius americanus		shorebird	N.

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Common Name Obse	Observed Scientific Name		Comments	
Station ID: OBFLY04	Direction: E-W	Elevation: M		
WF IB white-faced ibis	1 AG/BANNISTER RD Plegadis chihi		shorebird	SSC
	7 - Total For OBFLY04 and E-W and M	W and M		
Station ID: OBFLY04	Direction: N - S	Elevation: H		
CA EG 18	AG/BANNISTER Bubulcus ibis		shorebird	N
18	- - Total For OBFLY04 and N	- S and H		
Station ID: OBFLY04	Direction: N-S	Elevation: H		
CA EG cattle egret	1 AG/BANNISTER RD Bubulcus ibis		shorebird	NL
	1 - Total For OBFLY04 and N-S and H	S and H		
Station ID: OBFLY04	Direction: N-S	Elevation: L		
GB HE 1 great blue heron	AG/BANNISTER RD Ardea herodias		shorebird	SENS
GR HE green heron	1 AG/BANNISTER RD Butorides virescens		shorebird	TV.
SN EG snowy egret	1 AG/BANNISTER RD Egretta thula		shorebird	NL
	3 - Total For OBFLY04 and N-S and L	S and L		
Station ID: OBFLY04	Direction: NE-SW	Elevation: M		
LB CU long-billed curlew	9 AG/BANNISTER Numenius americanus		shorebird	NL
	9 - Total For OBFLY04 and NE-SW and M	-SW and M		

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Species Code N. Common Name Obse	No. Habitat Observed Scientific Name		Bird Type Comments	Status
Station ID: OBFLY04	Direction: S-N	Elevation: H		
GULLS			shorebird	¥
sling	Larus spp.			
BULLS	2		shorebird	뉟
sling	Larus spp.			
LB CU 15	5 AG/BANNISTER		shorebird	¥
long-billed curlew	Numenius americanus			
21	1 - Total For OBFLY04 and S-N and H	N and H		
Station ID: OBFLY04	Direction: S-N	Elevation: L		
	3 AG/BANNISTER RD		shorebird	NL
cattle egret	Bubulcus ibis			
	1 AG/BANNISTER RD		shorebird	7
green heron	Butorides virescens			
	4 - Total For OBFLY04 and S-N and L	·N and L		
Station ID: OBFLY04	Direction: W-E	Elevation: M		
KIILL	3 AG/BANNISTER Charadrius vociferus		shorebird	NL
	3 - Total For OBFLY04 and W - E	- E and M		
Station ID: OBFLY04	Direction: W-E	Elevation: L		
CA EG cattle egret	5 AG/BANNISTER Bubulcus ibis		shorebird	N
	5 - Total For OBFLY04 and W-E and L	-E and L		

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Species Code         No.         Habitat         Habitat         Status         Status         Status         Comments         Comments         Status         Status         Comments         Comments         Status         Status         Status         Au         Au <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>						
Direction: W-E   Elevation: M	ıme			Bird Type Comments	Status	
1         Larus spp         1         Larus spp         1         - Larus spp         1         - Total For OBFLY04 and W-E and M         1         - Total For OBFLY04 and W-E and M         Imprection:         Elevation:         Imprection:         Imp	Station ID: OBFLY04					
- Total For OBFLY04 and W-E and M     Direction:				shorebird	¥	
1 - Total For OBFLY04 and WE and M   Direction:	gulls	Larus spp.				
Direction:         Elevation:         Elevation:           0         DESERT SCRUBHWY/CANAL         none           0         DESERT SCRUBHWY/CANAL         none           0         DESERT SCRUBHWY/CANAL         none           0         DESERT SCRUBHWY/CANAL         none           0         Total For OBFLY05 and and         passerine           8         DESERT SCRUBHWY/CANAL         passerine           8         DESERT SCRUBHWY/CANAL         passerine           Agelaius phoeniceus         passerine           20         DESERT SCRUBHWY/CANAL         passerine           Agelaius phoeniceus         passerine           20         DESERT SCRUBHWY/CANAL         passerine           Agelaius phoeniceus         none         none           20         Total For OBFLY05 and N-S and L         none           Direction:         N/A         Elevation:         N/A           none         none         none           0         none         none	1	- Total For OBFLY04 and W-E	and M			
0         DESERT SCRUBHWY/CANAL none         none           0         DESERT SCRUBHWY/CANAL none         none           0         DESERT SCRUBHWY/CANAL none         none           0         - Total For OBFLY05 and and none         L           8         DESERT SCRUBHWY/CANAL nonesiceus         Passerine           8         DESERT SCRUBHWY/CANAL nonesiceus         L           8         - Total For OBFLY05 and E-W and L         Passerine           20         DESERT SCRUBHWY/CANAL nonesiceus         Passerine           20         DESERT SCRUBHWY/CANAL nonesiceus         Passerine           20         - Total For OBFLY05 and N-S and L         none           20         - Total For OBFLY05 and N-S and L         Inone           20         - Total For OBFLY05 and N-S and L         Inone           20         - Total For OBFLY05 and N-S and U.         Inone	Station ID: OBFLY05	Direction:	Elevation:			
Desert SCRUB/HWY/CANAL         none           none         none           0         DESERT SCRUB/HWY/CANAL         none           Direction:         E-W         Elevation:         L           B         DESERT SCRUB/HWY/CANAL         DESERT SCRUB/HWY/CANAL         Desert SCRUB/HWY/CANAL         Desert SCRUB/HWY/CANAL           B         - Total For OBFLY05 and E-W and L         Desert SCRUB/HWY/CANAL         Desert SCRUB/HWY/CANAL         Desert SCRUB/HWY/CANAL           20         DESERT SCRUB/HWY/CANAL         Elevation:         N/A         Elevation:         N/A           20         Total For OBFLY05 and N-S and L         none         none         none           0         none         none         none           0         Total For OBFLY05 and N/A and N/A         none		DESERT SCRUB/HWY/CA	NAL	попе	NONE	
0         DESERT SCRUB/HWY/CANAL         none           0         DESERT SCRUB/HWY/CANAL         none           0         - Total For OBFLY05 and and none         levation: LA           2         - Total For OBFLY05 and E-W and L         passerine           8         DESERT SCRUB/HWY/CANAL         passerine           8         - Total For OBFLY05 and E-W and L         passerine           20         DESERT SCRUB/HWY/CANAL         passerine           4gelatus phoeniceus         Agelatus phoeniceus           20         Total For OBFLY05 and N-S and L           20         - Total For OBFLY05 and N-S and L           0         none           0         none           0         - Total For OBFLY05 and N/A and N/A	попе	попе				
none         none           0         DESERT SCRUBHWY/CANAL         none           0         Total For OBFLY05 and and         L           8         DESERT SCRUBHWY/CANAL         passerine           8         DESERT SCRUBHWY/CANAL         L           8         Total For OBFLY05 and E-W and L         L           20         DESERT SCRUBHWY/CANAL         L           20         DESERT SCRUBHWY/CANAL         Desemble           20         DESERT SCRUBHWY/CANAL         Desemble           20         Total For OBFLY05 and N-S and L         N/A           Direction:         N/A         Elevation:         N/A           0         none         none           0         Total For OBFLY05 and N/A and N/A         N/A		DESERT SCRUB/HWY/CA	NAL	none	NONE	
0         DESERT SCRUB/HWY/CANAL none         none           0         Total For OBFLY05 and and         Elevation:         L           8         DESERT SCRUB/HWY/CANAL Agelaius phoeniceus         L         P           8         DESERT SCRUB/HWY/CANAL         L         P           20         DIrection:         N-S         Elevation:         L           20         DESERT SCRUB/HWY/CANAL         P         Passerine           20         DESERT SCRUB/HWY/CANAL         P         P           20         DESERT SCRUB/HWY/CANAL         D         P           30         Direction:         N/A         Elevation:         N/A           30         Total For OBFLY05 and N/S and L         P         P           30         F         P         P         P           40         F         F         P         P           50         F         P         P         P         P           50         F         P	none	none				
Direction: E-W   Elevation: L   Passerine     Direction: E-W   Elevation: L   Passerine     Direction: N-S   Elevation: N-S   Elevation: N/A   Elevation: N/A   Passerine     Direction: N/A   Elevation: N/A   Passerine   Passerine     Direction: N/A   Elevation: N/A   Passerine   Passerine   Passerine     Direction: N/A   Elevation: N/A   Passerine   Passer		DESERT SCRUB/HWY/CA	NAL	none	NONE	
Direction: E-W       Elevation: L       passerine         8       DESERT SCRUB/HWY/CANAL       passerine         8       DESERT SCRUB/HWY/CANAL       passerine         8       - Total For OBFLY05 and E-W and L       L         20       DESERT SCRUB/HWY/CANAL       passerine         20       - Total For OBFLY05 and N-S and L       none         20       - Total For OBFLY05 and N-S and L       none         0       none       none         0       - Total For OBFLY05 and N/A and N/A	none	попе				
Bolivection:         E-W         Elevation:         L           8         DESERT SCRUB/HWY/CANAL         passerine           8         - Total For OBFLY05 and E-W and L         L           20         DESERT SCRUB/HWY/CANAL         Passerine           20         DESERT SCRUB/HWY/CANAL         Passerine           20         - Total For OBFLY05 and N-S and L         N/A           Direction:         N/A         Elevation:           0         none         none           1         - Total For OBFLY05 and N/A and N/A	0		15			
8       DESERT SCRUB/HWY/CANAL       passerine         8       - Total For OBFLY05 and E-W and L       L         20       DESERT SCRUB/HWY/CANAL       Elevation: L       passerine         20       DESERT SCRUB/HWY/CANAL       Described in S and L       Described in S and L         20       - Total For OBFLY05 and N-S and L       N/A       Elevation: N/A       Inone         0       none       none       none         0       none       none       none         0       Total For OBFLY05 and N/A and N/A       Described in N/A       Described in N/A	Station ID: OBFLY05					
8 - Total For OBFLY05 and E-W and L  Direction: N-S Elevation: L  20 DESERT SCRUB/HWY/CANAL  Agelaius phoeniceus  20 - Total For OBFLY05 and N-S and L  Direction: N/A Elevation: N/A  0 none	vinged blackbird	DESERT SCRUB/HWY/CA Agelaius phoeniceus	NAL	passerine	N	
Direction: N-S Elevation: L  DESERT SCRUB/HWY/CANAL Agelaius phoeniceus  20 - Total For OBFLY05 and N-S and L  Direction: N/A Elevation: N/A  0 - Total For OBFLY05 and N/A and N/A  0 - Total For OBFLY05 and N/A and N/A	8	- Total For OBFLY05 and E-W	f and L			
20         DESERT SCRUB/HWY/CANAL         passerine           blackbird         Agelaius phoeniceus         Agelaius phoeniceus           20         Total For OBFLY05 and N-S and L         N/A         Elevation: N/A         Inone           0         none         none         none         none           0         Total For OBFLY05 and N/A and N/A         none         none	Station ID: OBFLY05					
20 - Total For OBFLY05 and N-S and L  OBFLY05 Direction: N/A Elevation: N/A  0  none 0 - Total For OBFLY05 and N/A and N/A	winged blackbird	DESERT SCRUB/HWY/CA Agelaius phoeniceus	'NAL	passerine	<b>T</b> V	
OBFLY05         Direction:         N/A         Elevation:         N/A           0         none         0         - Total For OBFLY05 and N/A and N/A         - Total For OBFLY05 and N/A and N/A         - Total For OBFLY05 and N/A	20		and L			
0 none 0 1016						
0				none	NONE	
ı	none	none				
	0	<ul> <li>Total For OBFLY05 and N/A</li> </ul>	and N/A			

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Species Code No. Habitat Common Name Observed Scientific Name	Bird Type Comments	Status
Station ID: OBFLY05 Direction: NW-SE Elevation: M		
DC CO 4 DESERT SCRUB/AG/HWY/CANAL double-crested cormorant Phalacrocorax auritus	water	SSC
4 - Total For OBFLY05 and NW-SE and M		
Station ID: OBFLY05 Direction: S-N Elevation: H		
TU VU 1 DESERT SCRUB/HWY/CANAL turkey vulture Cathartes aura	raptor	N
1 - Total For OBFLY05 and S-N and H		
Station ID: OBFLY05 Direction: S-N Elevation: M		
RW BL 6 DESERT SCRUB/HWY/CANAL red-winged blackbird Agelaius phoeniceus	passerine	NL
6 - Total For OBFLY05 and S-N and M		
Station ID: OBFLY05 Direction: SE-NW Elevation: L		
DC CO 1 DESERT SCRUB/AG/HWY/CANAL double-crested cormorant Phalacrocorax auritus	water	ssc
1 - Total For OBFLY05 and SE-NW and L		
Station ID: OBFLY05 Direction: SE-NW Elevation: M		
DC CO 1 DESERT SCRUB/AG/HWY/CANAL double-crested cormorant Phalacrocorax auritus	water	SSC
1 - Total For OBFLY05 and SE-NW and M		
Station ID: OBFLY06 Direction: N-S Elevation: M		
CA EG 1 AG/EXISTING POWER PLANT cattle egret Bubulcus ibis	shorebird	NL
1 - Total For OBFLY06 and N - S and M		

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Common Name Observed	rved Scientific Name		Comments	
Station ID: OBFLY06	Direction: N-S	Elevation: H		
BR PE 12			water	ENDANG
brown pelican	Pelecanus occidentalis			
GULLS 1			shorebird	₹
gulls	Larus spp.			
SN GO 50	AG/EXISTING POWER PLANT	ANT	shorebird	¥
snow goose	Chen caerulescens			
63	Total For OBFLY06 and N-S and H	S and H		
Station ID: OBFLY06	Direction: N-S	Elevation: L		
SN EG 1	AG/EXISTING POWER PLANT Egretta thula	ANT	shorebird	NL
	1 - Total For OBFLY06 and N-S and L	S and L		
Station ID: OBFLY06	Direction: NW-SE	Elevation: H		
GULLS 4			shorebird	뉟
gulls	Larus spp.			
,	4 - Total For OBFLY06 and NW-SE and H	4-SE and H		
Station ID: OBFLY06	Direction: S-N	Elevation: M		
LB CU 2			shorebird	N
long-billed curlew	Numenius americanus			
	2 - Total For OBFLY06 and S-N	N and M		
Station ID: OBFLY06	Direction: W-E	Elevation: H		
8 GULLS 8			shorebird	Z
gulls	Larus spp.			
GULLS 24			shorebird	J.
SHE	l agric onn			

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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	Das	iseu oli dilectioni alla Elevation	alla Elevation		_
Species Code No. Common Name Observed	o. Habitat erved Scientific Name		Bird Type Comments	Status	
Station ID: OBFLY06	Direction: W-E	Elevation: H			
TERN 2	AGEXISTING POWER PLANT Stema spp.	ANT	shorebird	NL	
34	4 - Total For OBFLY06 and W-E and H	E and H			
Station ID: OBFLY06	Direction: W-E	Elevation: L			
GULLS 9	Larus spp.		shorebird	7	
	1 - Total For OBFLY06 and W-E and L	E and L			
Station ID: OBFLY06	Direction: W-E	Elevation: M			
GULLS 34			shorebird	N.	
gulls	Larus spp.				
OP STIPS			shorebird	7	
gulls	Larus spp.				
94	4 - Total For OBFLY06 and W-E and M	E and M			
Station ID: OBFLY07	Direction:	Elevation:			
NONE	HWY/DESERT SCRUB/WASH	4SH	none	NONE	
none	попе				
	0 - Total For OBFLY07 and and	þ			
Station ID: OBFLY07	Direction: N/A	Elevation: N/A			
NONE 0	_		none	NOME	
none	none				
	0 - Total For OBFLY07 and N/A and N/A	and N/A			

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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	מם	ised oli directioni aliu Elevation	alla Elevation	500 -	990 0 10 00
Species Code No. Common Name Observed	Habitat ved Scientific Name		Bird Type Comments	Status	
Station ID: OBFLY07	Direction: NW-SE	Elevation: H			
SN GO 10	HWY/DESERT SCRUB/WASH Chen caerulescens	HSN	shorebird	Z	
10	- Total For OBFLY07 and NW-SE and H	-SE and H			
Station ID: OBFLY07	Direction: NW-SE	Elevation: M			
DC CO 1	HWY/DESERT SCRUB/WASH Phalacrocorax auritus	HSN	water	SSC	
1	- Total For OBFLY07 and NW-SE and M	-SE and M			
Station ID: OBFLY08	Direction: E-W	Elevation: H			
GULLS 1			shorebird	N	
gulls	Larus spp.				
1	<ul><li>Total For OBFLY08 and E-W and H</li></ul>	/ and H			
Station ID: OBFLY08	Direction: E-W	Elevation: L			
CA EG 1			shorebird	Z	
cattle egret	Bubulcus ibis				
-	- Total For OBFLY08 and E-W and L	f and L			
Station ID: OBFLY08	Direction: E-W	Elevation: M			
GULLS 1	ans sine l		shorebird	¥	
	- Total For OBFLY08 and E-W and M	/ and M			
Station ID: OBFLY08	Direction: N-S	Elevation: H			
CA EG 2 cattle egret	Bubulcus ibis		shorebird	뒫	

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Species Code No. Common Name Observed	). Habitat rved Scientific Name		Bird Type Comments	Stafus
Station ID: OBFLY08	Direction: N-S	Elevation: H		
GULLS 4			shorebird	NL
sling	Larus spp.			
9	- Total For OBFLY08 and N-S and H	S and H		
Station ID: OBFLY08	Direction: N-S	Elevation: L		
BN ST 3			shorebird	N.
black-necked stilt	Himantopus mexicanus			
CA EG 72	AG		shorebird	N
cattle egret	Bubulcus ibis			
DUCKS 1			water	Ī
ducks	Anas spp., Aythya spp.			
9/	Total For OBFLY08 and N-S and L	S and L		
Station ID: OBFLY08	Direction: N-S	Elevation: M		
BN ST 1			shorebird	٦
black-necked stilt	Himantopus mexicanus			
CA EG 15	AG		shorebird	īv
cattle egret	Bubulcus ibis			
16	Total For OBFLY08 and N-S and M	S and M		
Station ID: OBFLY08	Direction: N/A	Elevation: N/A		
NONE			none	NONE
none	none			
0	- Total For OBFLY08 and N/A and N/A	A and N/A		

# Total Number of Birds Observed In Each Station

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Species Code No. Habitat Common Name Observed Scientific Name	Bird Type Comments	Status
Station ID: OBFLY08 Direction: NE-SW Elevation: H		
CA EG 1 Bubulous ibis	shorebird	NL
1 - Total For OBFLY08 and NE-SW and H		
Station ID: OBFLY08 Direction: NW-SE Elevation: H		
GULLS 11 Larus spp.	shorebird	N
Station ID: OBFLY08 Direction: NW-SE Elevation: L		
GULLS 2 Larus spp.	shorebird	NL
2 - Total For OBFLY08 and NW-SE and L		
Station ID: OBFLY08 Direction: S-N Elevation: H		
CA EG 4 Bubulcus ibis	shorebird	N
4 - Total For OBFLY08 and S-N and H		
Station ID: OBFLY08 Direction: S-N Elevation: L		
BN ST 1 Himantopus mexicanus	shorebird	JV
DUCKS 2 Anas spp., Aythya spp.	water	NL
3 - Total For OBFLY08 and S-N and L		

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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But Station ID: OBFLYOB   Direction: S-N   Elevation: M   Shorebird   Shoreb	Species Code N. Common Name Obse	No. Habitat Observed Scientific Name		Bird Type Comments	Status
1         Himantopus mexicanus         shorebird           1         Himantopus mexicanus         shorebird           1         Casmarodius albus         shorebird           3         Total For OBFLY08 and S-N and M         shorebird           2         Bubulcus ibis         shorebird           4         Total For OBFLY08 and SE-NW and ?         shorebird           0         Larus spp.         shorebird           1         Bubulcus ibis         shorebird           2         Total For OBFLY08 and SE-NW and M         shorebird           2         Total For OBFLY08 and SE-NW and M         shorebird           3         Larus spp.         shorebird	Station ID: OBFLY08				
Himantopus mexicanus  1		_		shorebird	Į.
1 Himantopus mexicanus 1 Casmerodius albus 3 - Total For OBFLY08 and S-N and M Direction: SE-NW Elevation: 7 Bubulcus ibis 1	black-necked stilt	Himantopus mexicanus			
Hilmantopus mexicanus     Casmerodius albus     3 - Total For OBFLY08 and S-N and M     Direction: SE-NW   Elevation: ?   Shorebird     Larus spp.   Shorebird   Shorebird     Larus spp.   Shorebird   Shorebird   Shorebird   Shorebird     Bubulcus lbis   Shorebird   Sh		-		shorebird	₹
1 Casmerodius albus 3 - Total For OBFLY08 and S-N and M Direction: SE-NW Elevation: ?  2 Bubulcus lbis 2 Larus spp. 1 Bubulcus lbis 3 Larus spp. 2 - Total For OBFLY08 and SE-NW and M Direction: SW-NE Elevation: H Sincrebird shorebird shorebird shorebird shorebird shorebird shorebird shorebird shorebird shorebird shorestion: SW-NE Elevation: H 3 Larus spp. 3 Larus spp. 3 Larus spp. 4 - Total For OBFLY08 and SE-NW and M Direction: SW-NE Elevation: H Shorebird shor	black-necked stilt	Himantopus mexicanus			
Casmerodius albus		-		shorebird	¬N
3 - Total For OBFLY08 and S-N and M         Sincetion: SE-NW         Elevation: Pelevation: Pelev	great egret	Casmerodius albus			
Direction: SE-NW         Elevation: ?         shorebird           2         shorebird         shorebird           2         Larus spp.         shorebird           4 - Total For OBFLY08 and SE-NW and ?         A         Shorebird           1         Bubulcus ibis         shorebird           1         Larus spp.         shorebird           2 - Total For OBFLY08 and SE-NW and M         shorebird           2 - Total For OBFLY08 and SW-NE and H         shorebird           3         Larus spp.           3         Larus spp.           3         Larus spp.           3         Larus spp.			and M		
2 Bubulcus ibis  2 Larus spp. 4 - Total For OBFLY08 and SE-NW and ?  OBFLY08 Direction: SE-NW Elevation: M shorebird  1 Bubulcus ibis 1 Larus spp. 2 - Total For OBFLY08 and SE-NW and M SE-NW and M SE-NW and SE-NW and M SE-NW and SE-NW and M SE-NW and SE-NW and M SE-NW and SE-NW and M SE-NW and SE-NW and SE-NW and SE-NW and M SE-NW and SE-NW a	Station ID: OBFLY08				
Shorebird   Shorebird   Shorebird   Shorebird   Shorebird     4 - Total For OBFLY08 and SE-NW and ?   Shorebird		2		shorebird	Z
2					
Larus spp.           OBFLY08         Direction:         SE-NW         Elevation:         M           1         Bubulcus lbis         shorebird           1         Larus spp.         shorebird           2 - Total For OBFLY08 and SE-NW and M         shorebird           OBFLY08         Direction:         SW-NE         Elevation:         H           3         Larus spp.         shorebird         shorebird           3         Larus spp.         shorebird         shorebird           3         Lotal For OBFLY08 and SW-NE and H         shorebird		2		shorebird	N
A - Total For OBFLY08 and SE-NW and ?           OBFLY08         Direction: SE-NW Elevation: M shorebird         Shorebird           1         Larus spp.         shorebird           2 - Total For OBFLY08 and SE-NW and M OBFLY08         birection: SW-NE Elevation: H shorebird         shorebird           3         Larus spp.         shorebird           3 - Total For OBFLY08 and SW-NE and H         shorebird	gulls	Larus spp.			
OBFLY08         Direction: SE-NW         Elevation: M         Shorebird           1         Bubulcus ibis         shorebird           1         Larus spp.         shorebird           2         Total For OBFLY08 and SE-NW and M         shorebird           OBFLY08         Direction: SW-NE         Elevation: H         shorebird           3         Larus spp.         tarus spp.         shorebird           3         Total For OBFLY08 and SW-NE and H         shorebird		ا ا	NW and ?		
1 shorebird should be shored by the shore of					
1 Larus spp.  2 - Total For OBFLY08 and SE-NW and M  OBFLY08 Direction: SW-NE Elevation: H  3 - Total For OBFLY08 and SW-NE and H				shorebird	J.
1 Larus spp. 2 - Total For OBFLY08 and SE-NW and M  OBFLY08 Direction: SW-NE Elevation: H  3 Larus spp. 3 - Total For OBFLY08 and SW-NE and H  3 - Total For OBFLY08 and SW-NE and H	cattle egret	Bubulcus ibis			
DBFLY08 Direction: SW-NE Elevation: H shorebird Earus spp.  3 Larus spp. 3 - Total For OBFLY08 and SW-NE and H		-		shorebird	7
OBFLY08 Direction: SW-NE Elevation: H shorebird  3 Larus spp. 3 - Total For OBFLY08 and SW-NE and H	gulls	Larus spp.			
OBFLY08 Direction: SW-NE Elevation: H shorebird shore spp.  3 Larus spp. 3 - Total For OBFLY08 and SW-NE and H		1	NW and M		
3 Larus spp. 3 - Total For OBFLY08 and SW-NE and H					
     		8		shorebird	N
	gulls	Larus spp.			
			-NE and H		

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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OBFLY08         Direction:         W-E         Elevation:           ned night-heron         1         Egretta thula         Elevation:           2         - Total For OBFLY08 and W-E and H         Elevation:           OBFLY08         Direction:         W-E         Elevation:           2         - Total For OBFLY08 and W-E and M         OBFLY09         OBFLY09           OBFLY09         Direction:         AG         Elevation:           AG         none         O - Total For OBFLY09 and and         Elevation:           2         Larus spp.         Larus spp.         Elevation:           2         Larus spp.         Elevation:           2         Larus spp.         Elevation:           2         Larus spp.         Elevation:           2         - Total For OBFLY09 and E-W and L	COMMISSION	
1  Egretta thula 2 - Total For OBFLY08 and W-E and H  Direction: W-E Elevation: M  2 Bubulcus ibis 2 - Total For OBFLY08 and W-E and M  Direction: Elevation: Elevation:  AG  none 0 - Total For OBFLY09 and and  Direction: E-W Elevation: L  2 Larus spp. 2 Larus spp. 2 - Total For OBFLY09 and E-W and L		
1 Egretta thula 2 - Total For OBFLY08 and W-E and H Direction: W-E Elevation: M 2 - Bubulcus ibis 2 - Total For OBFLY08 and W-E and M Direction: Elevation: Elevation: AG none 0 - Total For OBFLY09 and and Direction: E-W Elevation: L 2 Larus spp. 2 Larus spp. 2 - Total For OBFLY09 and E-W and L	orebird	SENS
2 - Total For OBFLY08 and W-E and H  Direction: W-E Elevation: M  2 Bubulcus ibis 2 - Total For OBFLY08 and W-E and M  Direction: Elevation:  AG  none  0 - Total For OBFLY09 and and  Direction: E-W Elevation: L  2 Larus spp. 2 Larus spp.		
Egretta thula  2 - Total For OBFLY08 and W-E and H  Direction: W-E Elevation: M  2 - Bubulcus ibis 2 - Total For OBFLY08 and W-E and M  Direction: Elevation: Elevation: AG  none 0 - Total For OBFLY09 and and Direction: E-W Elevation: L  2 Larus spp. 2 Larus spp. 2 - Total For OBFLY09 and E-W and L	orebird	¥
2 - Total For OBFLY08 and W-E and H  Direction: W-E Elevation: M  2		
Direction: W-E Elevation: M  2		
2		
Bubulcus ibis  2 - Total For OBFLY08 and W-E and M  Direction: E-W Elevation: L  Direction: E-W Elevation: L  2 Larus spp.  2 Larus spp.	orebird	- N
2 - Total For OBFLY08 and W-E and M  Direction: Elevation:  AG  none 0 - Total For OBFLY09 and and Direction: E-W Elevation: L  2 Larus spp. 2 Larus spp. 2 - Total For OBFLY09 and E-W and L		
AG  AG  none  1 - Total For OBFLY09 and and  Direction: E-W Elevation: L  2 Larus spp. 2 Larus spp.		
AG none  1 - Total For OBFLY09 and and Direction: E-W Elevation: L  2 Larus spp. 2 Larus spp. 2 - Total For OBFLY09 and E-W and L		
Direction: E-W Elevation: L  2 Larus spp. 2 Larus spp. 2 - Total For OBFLY09 and E-W and L	ne Te	NONE
0 - Total For OBFLY09 and and Direction: E-W Elevation: L  2 Larus spp. 2 - Total For OBFLY09 and E-W and L		
Direction: E-W Elevation: L  2 Larus spp. 2 - Total For OBFLY09 and E-W and L		
2 Larus spp. 2 - Total For OBFLY09 and E-W and L		
Larus spp.  2 - Total For OBFLY09 and E-W and L	orebird	¥
2 - Total For OBFLY09 and E-W and L		
Station ID: OBFLY09 Direction: E-W Elevation: M		
GULLS 1 shorebird	orebird	Į.
gulls Larus spp.		
1 - Total For OBELY09 and E-W and M		

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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	283	sed on Direction and Lievation	alla Lievation	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Species Code No. Common Name Observed	Habitat ed Scientific Name		Bird Type Comments	Status
Station ID: OBFLY09	Direction: N-S	Elevation: H		
SN GO 30	AG Chen caerulescens		shorebird	¥
30	- Total For OBFLY09 and N-S and H	and H		
Station ID: OBFLY09	Direction: N-S	Elevation: M		
GULLS 4			shorebird	N
gulls	Larus spp.			
4 -	- Total For OBFLY09 and N-S and M	and M		
Station ID: OBFLY09	Direction: NW-SE	Elevation: H		
GULLS 65			shorebird	Ā
gulls	Larus spp.			
- 69	- - Total For OBFLY09 and NW-SE and H	SE and H		
Station ID: OBFLY09	Direction: NW-SE	Elevation: L		
GULLS 13			shorebird	N
gulls	Larus spp.			
13 -	- Total For OBFLY09 and NW-SE and L	-SE and L		
Station ID: OBFLY09	Direction: NW-SE	Elevation: M		
GULLS 195			shorebird	¥
gulls	Larus spp.			
195 -	- Total For OBFLY09 and NW-SE and M	-SE and M		
Station ID: OBFLY09	Direction: SE-NW	Elevation: H		
CORM 1	Phalacrocorax spp.		water	T.
-	- Total For OBFLY09 and SE-NW and H	NW and H		

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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	Õ	based on Direction and Elevation	and Elevation	Ĺ	rage 57 of 66
Species Code Common Name Obs	No. Habitat Observed Scientific Name		Bird Type Comments	Status	
Station ID: OBFLY09	Direction: W-E	Elevation: H			
CA EG cattle egret	3 AG Bubulcus ibis		shorebird	Z	
	3 - Total For OBFLY09 and W - E and H	- E and H			
Station ID: OBFLY09	Direction: W-E	Elevation: M			
SN GO	6 Chen caerulescens		shorebird	뉟	
	6 - Total For OBFLY09 and W-E and M	-E and M			
Station ID: OBFLY10	Direction: E-W	Elevation: H			
CA EG cattle egret	3 AG Bubulcus ibis		shorebird	¥	
GULLS	10 Larus spp.		shorebird	NL	
	13 - Total For OBFLY10 and E-W and H	W and H			
Station ID: OBFLY10	Direction: E-W	Elevation: L			
CA EG	_		shorebird	₹	
cattle egret	Bubulcus ibis				
CA EG			shorebird	N	
cattle egret					
DC 00	2 AG		water	SSC	
GULLS	riadorocoras aurius 5		shorebird	2	
sling	Larus spp.				
SNEG	_		shorebird	¥	
snowy egret	Egretta thula				
	10 - Total For OBFLY10 and E-W and L	W and L			

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Common Name Observed	ved Scientific Name		Comments	
Station ID: OBFLY10	Direction: E-W	Elevation: M		
GR EG 2	AG		shorebird	NL
great egret	Casmerodius albus			
GULLS 45	Larus spp.		shorebird	¥
47	- Total For OBFLY10 and E-W and M	V and M		
Station ID: OBFLY10	Direction: N-S	Elevation: H		
AW PE	Contract to the second	4	water	Z
Allendal Wille pelleal		and H		
00 E1 V40		;		
n ID: OBFLT 10	Direction: IN-3	Elevation: L		
CA EG 1	AG Rubulcus ibis		shorebird	JN
5.50				
LBCU 3			shorebird	J.
long-billed curlew	Numenius americanus			
4	- Total For OBFLY10 and N-S	s and L		
Station ID: OBFLY10	Direction: N-S	Elevation: M		
CA EG 1	AG		shorebird	J.
cattle egret	Bubulcus ibis			
1	<ul><li>Total For OBFLY10 and N-S and M</li></ul>	s and M		
Station ID: OBFLY10	Direction: NE - SW	Elevation: M		
DC CO 1	AG Phalacrocorax auritus		water	SSC
FO TE 4	AG		shorebird	SSC

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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	r r		d Lievalion	2000
Species Code No. Common Name Observed	o. Habitat erved Scientific Name		Bird Type Comments	Stafus
<b>†</b>	5 - Total For OBFLY10 and NE - SW and M	W and M		
Station ID: OBFLY10	Direction: NE-SW	Elevation: H		
CA EG 1 cattle egret	Bubulcus ibis		shorebird	NL
,	1 - Total For OBFLY10 and NE-SW and H	f and H		
Station ID: OBFLY10	Direction: NE-SW	Elevation: L		
WF IB 20 white-faced ibis	n Plegadis chihi		shorebird	ssc
20	. Total For OBFLY10 and NE-SW and L	f and L		
Station ID: OBFLY10	Direction: NE-SW	Elevation: M		
CA EG 1			shorebird	N. N. P.
cattle egret	Bubulcus ibis			
WF IB 41 white-faced ibis	Plegadis chihi		shorebird	ssc
42	2 - Total For OBFLY10 and NE-SW and M	fand M		
Station ID: OBFLY10	Direction: NW-SE	Elevation: H		
LB CU 15	AG Numenius americanus		shorebird	<del>J</del>
LB CU 60 Folled curlew			shorebird	T/
MA GO 12 marbled godwit	. AG Limosa fedoa		shorebird	NL
87	7 - Total For OBFLY10 and NW-SE and H	and H		

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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	Das	sed on Direction and Elevation	and Elevation		rage 40 or bo
Species Code Common Name Ob	No. Habitat Observed Scientific Name		Bird Type Comments	Status	
Station ID: OBFLY10	Direction: NW-SE	Elevation: M			
GULLS	1 Larus spp.		shorebird	Z	
	1 - Total For OBFLY10 and NW-SE and M	SE and M			
Station ID: OBFLY10	Direction: S-N	Elevation: L			
CAEG	-		shorebird	N.	
cattle egret	Bubulcus ibis				
FOTE	2 AG		shorebird	SSC	
Forster's tern	Sterna forsteri				
SAND	4 AG		shorebird	NL	
sandpipers	Tringa spp.				
	7 - Total For OBFLY10 and S-N and L	and L			
Station ID: OBFLY10	Direction: S-N	Elevation: M			
CA EG	1		shorebird	¥	
cattle egret	Bubulcus ibis				
GULLS	₩		shorebird	¥	
sling	Larus spp.				
	2 - Total For OBFLY10 and S-N and M	and M			
Station ID: OBFLY10	Direction: SE-NW	Elevation: H			
CAEG	2		shorebird	7	
cattle egret	Bubulcus ibis				
GULLS	<b>-</b>		shorebird	NL	
gulls	Larus spp.				
	3 - Total For OBFLY10 and SE-NW and H	NW and H			

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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	Direction: SE-NW   Elevation: L shorebird sh	Species Code N Common Name Obs	No. Habitat Observed Scientific Name		Bird Type Comments	Status
shorebird  Charactrius vocificus  6 - Total For OBFLY10 and SE-NW and L  Direction: SE-NW Elevation: M  Shorebird  Limnodromus scolopaceus  6 - Total For OBFLY10 and SE-NW and M  Direction: SW-NE Elevation: H  Shorebird  Shorebird  1 Numerius americanus  3 - Total For OBFLY10 and SW-NE and H  Direction: W-E Elevation: H  Shorebird  Shorebi	5         Lenus spp.         shorebird           1         Charadrius vociferus         shorebird           6 - Total For OBFLY10 and SE-NW and L         Direction: SE-NW Elevation: M         shorebird           5         Larus spp.         shorebird           1         Limnodromus scolopaceus         shorebird           6 - Total For OBFLY10 and SE-NW and M         shorebird           2         Bubulcus ibis         shorebird           3         Total For OBFLY10 and SW-NE and H         shorebird           Bubulcus ibis         Bubulcus ibis         shorebird           8         AG         shorebird           Bubulcus ibis         Bubulcus ibis         shorebird           8         AG         shorebird           Bubulcus ibis         shorebird         shorebird	Station ID: OBFLY10		Elevation: L		
1 Cheractrius vociferus 6 - Total For OBFLY10 and SE-NW and L Direction: SE-NW Elevation: M shorebird 1 AG Larus spp. 6 - Total For OBFLY10 and SE-NW and M Direction: SW-NE Elevation: H Shorebird 2 Bubulcus ibis 1 Numerius americanus 3 - Total For OBFLY10 and SW-NE and H Direction: W-E Elevation: H Shorebird Shoreb	Larus spp.   Shorebird   Shorebird     Charactrius vociferus   SE-NW   Elevation:   M   Shorebird     Direction:   SE-NW   Elevation:   M   Shorebird     AG		5		shorebird	귄
6 - Total For OBFLY10 and SE-NW and L  Direction: SE-NW Elevation: M  shorebird  Larus spp.  1 AG  Limnodromus scolopaceus  6 - Total For OBFLY10 and SE-NW and M  Direction: SW-NE Elevation: H  shorebird  2 Bubulcus ibis  1 Numenius americanus  3 - Total For OBFLY10 and SW-NE and H  Direction: W-E Elevation: H  Shorebird  shorebird  shorebird  shorebird  shorebird  shorebird  shorebird  shorebird  Bubulcus ibis  8 AG  Total For OBFLY10 and W-E and H  SHOREBIY 10 and SW-NE and H	Charactrius vociferus     Charactrius vociferus     Charactrius vociferus     Direction: SE-NW   Elevation: M   shorebird     AG	sling	Larus spp.			
Charactrius vociferus  6 - Total For OBFLY10 and SE-NW and L  Direction: SE-NW Elevation: M  5	Charactrius vociferus     Charactrius vociferus     Charactrius SE-NW and L     Direction: SE-NW Elevation: M     Shorebird     AG		-		shorebird	
6 - Total For OBFLY10 and SE-NW and L           Direction:         SE-NW Elevation:         M           5         Larus spp.         shorebird           1         AG         shorebird           1         AG         shorebird           6 - Total For OBFLY10 and SE-NW and M         h         shorebird           2         Bubulcus ibis         shorebird           3         Total For OBFLY10 and SW-NE and H         shorebird           Bubulcus ibis         AG         shorebird           8         AG         shorebird           Bubulcus ibis         H         shorebird           8         AG         shorebird           Bubulcus ibis         shorebird         shorebird	6 - Total For OBELY10 and SE-NW and L         Pirection: SE-NW Elevation: M         shorebird           5 - Larus spp.         shorebird         shorebird           1 AG         Limnodromus scolepaceus         shorebird           6 - Total For OBFLY10 and SE-NW and M         shorebird           2 Bubulcus ibis         shorebird           1 Numenius americanus         shorebird           3 - Total For OBFLY10 and SW-NE and H         shorebird           8 AG         shorebird           Bubulcus ibis         H	killdeer	Charadrius vociferus			
5       Larus spp.       shorebird         1       AG       Limnodromus scolopaceus       shorebird         6       - Total For OBFLY10 and SE-NW and M       shorebird         Direction: SW-NE       Elevation: H       shorebird         2       Bubulcus ibis       shorebird         1       Numenius americanus       shorebird         3       - Total For OBFLY10 and SW-NE and H       shorebird         Bubulcus ibis       AG       shorebird         8       AG       shorebird         Bubulcus ibis       shorebird	5         Larus spp.         shorebird           1         AG         Limnodromus scolopaceus         shorebird           6         - Total For OBFLY10 and SE-NW and M         H         shorebird           2         Bubulcus ibis         H         shorebird           1         Numenius americanus         Shorebird         shorebird           3         - Total For OBFLY10 and SW-NE and H         shorebird         shorebird           3         - Total For OBFLY10 and W-E and H         shorebird         shorebird           8         AG         AG         shorebird		ll .	NW and L		
shorebird shore spp.  1 AG Larus spp.  1 AG Limnodromus scolopaceus 6 - Total For OBFLY10 and SE-NW and M Direction: SW-NE Elevation: H Shorebird 1 Shorebird 3 - Total For OBFLY10 and SW-NE and H Direction: W-E Elevation: H Shorebird Sh	5         Larus spp.         shorebird           1         AG         Larus spp.         shorebird           6 - Total For OBFLY10 and SE-NW and M         Direction: SW-NE Elevation: H         shorebird           2         Bubulcus ibis         shorebird           1         Numenius americanus         shorebird           3 - Total For OBFLY10 and SW-NE and H         shorebird           8         AG         shorebird           Bubulcus ibis         Bubulcus ibis         shorebird           8         AG         shorebird           8         Total For OBFLY10 and W-E and H         shorebird	Station ID: OBFLY10	l			
Larus spp.           1         AG         shorebird           Limnodromus scolopaceus         shorebird           6 - Total For OBFLY10 and SE-NW and M         shorebird           Direction: SW-NE         Elevation: H         shorebird           3 - Total For OBFLY10 and SW-NE and H         Elevation: H         shorebird           Bubulcus ibis         Bubulcus ibis         shorebird           Bubulcus ibis         shorebird         shorebird	Larus spp.           1         AG         shorebird           6 - Total For OBFLY10 and SE-NW and M         shorebird           2         Bubulcus ibis         shorebird           1         Numenius americanus         shorebird           3 - Total For OBFLY10 and SW-NE and H         shorebird           Bubulcus ibis         H         shorebird           8 - Total For OBFLY10 and W-E and H         shorebird		5		shorebird	N
1 AG Limnodromus scolopaceus 6 - Total For OBFLY10 and SE-NW and M  Direction: SW-NE Elevation: H  Subulcus ibis 1 Numenius americanus 3 - Total For OBFLY10 and SW-NE and H  Direction: W-E Elevation: H  Shorebird Sho	1         AG         shorebird           6         - Total For OBFLY10 and SE-NW and M         Shorebird           2         Bubulcus ibis         shorebird           1         Numenius americanus         shorebird           3         - Total For OBFLY10 and SW-NE and H         shorebird           Bubulcus ibis         AG         shorebird           8         AG         shorebird           8         Total For OBFLY10 and W-E and H         shorebird					
6 - Total For OBFLY10 and SE-NW and M  Direction: SW-NE Elevation: H  Shorebird  1	Limnodromus scolopaceus  6 - Total For OBFLY10 and SE-NW and M  Direction: SW-NE Elevation: H  2 Bubulcus ibis  1 Numenius americanus  3 - Total For OBFLY10 and SW-NE and H  Direction: W-E Elevation: H  8 AG  Bubulcus ibis  8 AG  8 - Total For OBFLY10 and W-E and H  8 - Total For OBFLY10 and W-E and H				shorebird	₹
6 - Total For OBFLY10 and SE-NW and M  Direction: SW-NE Elevation: H  2	6 - Total For OBFLY10 and SE-NW and M  Direction: SW-NE Elevation: H shorebird shore ibis  1	long-billed dowitcher	Limnodromus scolopaceu	ls.		
Direction: SW-NE Elevation: H shorebird should bis shorebird shore	Direction: SW-NE Elevation: H shorebird   2 Bubulcus ibis shorebird   1 Numenius americanus shorebird   3 Total For OBFLY10 and SW-NE and H shorebird   8 AG shorebird   Bubulcus ibis shorebird   8 AG shorebird   Bubulcus ibis shorebird   8 Total For OBFLY10 and W-E and H shorebird		'	NW and M		
2 Shorebird shor	2 Shorebird short shis shorebird shorebird shorebird short samericanus 3 - Total For OBFLY10 and SW-NE and H  Bubulcus ibis SW-NE and H  8 AG Bubulcus ibis shorebird short sh	Station ID: OBFLY10				
1 Shorebird  Numenius americanus 3 - Total For OBFLY10 and SW-NE and H  Direction: W-E Elevation: H  8 AG  Bubulcus ibis A - Total For OBFLY0 and W-E and H	1 Shorebird shore shis shorebird shorebird shorebird shore s		2		shorebird	뉟
Shorebird  Numenius americanus 3 - Total For OBFLY10 and SW-NE and H  Direction: W-E Elevation: H  8 AG  Bubulcus ibis A - Total For OBFLY10 and W-F and H	1 Numenius americanus 3 - Total For OBFLY10 and SW-NE and H Direction: W-E Elevation: H 8 AG Bubulcus ibis 8 - Total For OBFLY10 and W-E and H	cattle egret	Bubulcus ibis			
Numenius americanus  3 - Total For OBFLY10 and SW-NE and H  Direction: W-E Elevation: H  8 AG  Bubulcus ibis  8 - Total For OBFLY0 and W-F and H	3 - Total For OBFLY10 and SW-NE and H Direction: W-E Elevation: H  8 AG Bubulcus ibis Bubulcus ibis 8 - Total For OBFLY10 and W-E and H		_		shorebird	₹
3 - Total For OBFLY10 and SW-NE and H  Direction: W-E Elevation: H  8 AG  Bubulous ibis  8 - Total For OBFLY10 and W-F and H	3 - Total For OBFLY10 and SW-NE and H  Direction: W-E Elevation: H  8 AG  Bubulcus ibis  8 - Total For OBFLY10 and W-E and H	long-billed curlew	Numenius americanus			
Bubulcus ibis Bubulcus ibis Bubulcus ibis Bubulcus ibis Bubulcus ibis Bubulcus ibis	Direction: W-E       Elevation: H         8       AG       shorebird         Bubulcus ibis       shorebird         8       - Total For OBFLY10 and W-E and H			NE and H		
segret Bubulous ibis  8 AG  Shorebird  S - Total For OBEI V10 and W-F and H	8 AG shorebird segret Bubulcus ibis 8 - Total For OBFLY10 and W-E and H	Station ID: OBFLY10				
cc	8	a dret			shorebird	N
			- II	and H		

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Station   COBFLY10   Direction: W-E   Elevation: L	Species Code No.	No. Habitat Observed Scientific Name		Bird Type Comments	Status
2			Elevation: L		
Latus spp.   Shorebird     Latus spp.   Shorebird     AG	le-crested cormorant			water	SSC
AG				shorebird	N
A - Total For OBFLY10 and W-E and L           Bubulcus lbis         Shorebird           6 AG         AG           Bubulcus lbis         Inone           O - Total For OBFLY10 and W-E and M         Inone           Direction:         Elevation:         N/A           Direction:         N/A         Elevation:           0         Total For OBFLY11 and N/A and N/A         Inone           0 - Total For OBFLY11 and N/A and N/A         Inone         Inone           AG         AG         Inone           AG         Inone           AG         Inone	te-faced ibis			shorebird	SSC
6         AG         AG         shorebird           6 - Total For OBFLY10 and W-E and M none         Elevation:         Elevation:         Elevation:           O - Total For OBFLY11 and and N-B none         Inone         Inone         Inone           O - Total For OBFLY11 and and N-B none         Inone         Inone         Inone           O - Total For OBFLY11 and N-B and N-B none         Inone         Inone         Inone           O - Total For OBFLY11 and AlvA and N-B none         AG         Inone         Inone           O - Total For OBFLY12 and and none         Inone         Inone         Inone           O - Total For OBFLY12 and and         AG         Inone         Inone	7		and L		
6         AG         AG         AG         Abubulcus biss         shorebird           6 - Total For OBFLY10 and W-E and M         Elevation:         Elevation:         Connection:         Elevation:         N/A         Prone           0 - Total For OBFLY11 and All A and N/A         Direction:         N/A         Inone         Inone           0 - Total For OBFLY11 and N/A and N/A         Elevation:         Elevation:         Inone           0 - Total For OBFLY11 and All A and N/A         Inone         Inone           AG         Inone         Inone           AG         Inone         Inone           A G         Inone         Inone	Station ID: OBFLY10				
6 - Total For OBFLY10 and W-E and M           Direction:         Elevation:         Elevation:           HWY/DESERT SCRUB/ none         none           0 - Total For OBFLY11 and and N/A         none           0         none           0 - Total For OBFLY11 and N/A and N/A         none           O - Total For OBFLY11 and N/A and N/A         none           AG         none           0 - Total For OBFLY12 and and         none	e egret			shorebird	N
Direction:         Elevation:         none           0 - Total For OBFLY11 and Aud on a none         Inone         Inone           0 - Total For OBFLY11 and N/A and N/A         Elevation:         N/A           0 - Total For OBFLY11 and N/A and N/A         Inone         Inone           0 - Total For OBFLY11 and N/A and N/A         Inone         Inone           AG         Inone         Inone			and M		
HWY/DESERT SCRUB/	Station ID: OBFLY11	Direction:	Elevation:		
OBFLY11 and and           OBFLY11         Direction:         N/A         Elevation:         N/A           0         none         0 - Total For OBFLY11 and N/A and N/A         none         none           OBFLY12         Direction:         Elevation:         Elevation:         none           0 - Total For OBFLY12 and and         none         none         none	NONE	HWY/DESERT SCRUB/		none	NONE
OBFLY11         Direction:         N/A         Elevation:         N/A           0         none         0 - Total For OBFLY11 and N/A and N/A         none         none           OBFLY12         Direction:         Elevation:         none           0 - Total For OBFLY12 and and         none         none		II I			
OBFLY12         Direction:         Elevation:         Elevation:         none           0 - Total For OBFLY11 and N/A and N/A         none         none					
0 - Total For OBFLY11 and N/A and N/A           OBFLY12         Direction:         Elevation:           AG         none           none         0 - Total For OBFLY12 and and	(1)			попе	NONE
OBFLY12         Direction:         Elevation:           AG         none           none         0 - Total For OBFLY12 and and		<ul><li>Total For OBFLY11 and N/A</li></ul>	and N/A		
AG none  O - Total For OBFLY12 and and		Direction:	Elevation:		
Ш	NONE none	AG none		none	NONE
		II I	5		

Notes: "NR" = not recorded

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NOME	Bird Type Status Comments
Direction: E-W   Elevation: L   Shorebird     Direction: E-W   Elevation: L   Shorebird     Casmeroodius aibus   Shorebird     Egretta thuila   Egretta thuila     Egretta thuila   Egretta thuila     Direction: N-S   Elevation: H   Shorebird     Bubuicus ibis   Elevation: L   Shorebird     Direction: N-S   Elevation: L   Shorebird     Bubuicus ibis   Elevation: M   Shorebird     Bubuicus ibis   Elevation: M   Shorebird     Direction: N-S   Elevation: M   Shorebird     Directio	
Direction: E-W Elevation: L shorebird Casmerodius albus  2  AG Casmerodius albus 3  Larus spp. 1  Egretta thula 6 - Total For OBFLY13 and E-W and L Direction: N-S Elevation: H shorebird 2  Bubulcus ibis 2 - Total For OBFLY13 and H-S and H Direction: N-S Elevation: L shorebird 1  Bubulcus ibis	
Direction: E-W Elevation: L shorebird Casmerodius albus  2  AG Casmerodius albus 3  Larus spp. 1  Egretta thula 6 - Total For OBFLY13 and E-W and L Direction: N-S Elevation: H shorebird 2  Bubulcus ibis 2  - Total For OBFLY13 and N-S and H Direction: N-S Elevation: L shorebird 1  Bubulcus ibis 1  - Total For OBFLY13 and N-S and L Direction: N-S Elevation: M shorebird 1  Bubulcus ibis	
2         AG         Shorebird           3         Larus spp.         shorebird           1         Egretta thula         shorebird           6 - Total For OBFLY13 and E-W and L         Ashorebird           2         Bubulcus ibis         Flevation: H           2         Elevation: N-S         Elevation: L           1         Bubulcus ibis         Shorebird           1         Bubulcus ibis         Shorebird           1         Total For OBFLY13 and N-S and L         Shorebird           1         Total For OBFLY13 and N-S and L         Shorebird           1         Bubulcus ibis         Shorebird	
2 AG Casmerodius albus 3 Larus spp. 1 Egretta thula 6 - Total For OBFLY13 and E-W and L Direction: N-S Elevation: H Subulicus ibis 1 - Total For OBFLY13 and N-S and H Direction: N-S Elevation: L Shorebird shorebird 1 - Total For OBFLY13 and N-S and L Direction: N-S Elevation: M Bubulicus ibis 1 - Total For OBFLY13 and N-S and L Direction: N-S Elevation: M Shorebird 1 - Total For OBFLY13 and N-S and L Direction: N-S Elevation: M Shorebird 1 - Total For OBFLY13 and N-S and L	
Shorebird  Larus spp.  1 Egretta thula 6 - Total For OBFLY13 and E-W and L  Direction: N-S  Bubulcus ibis  1 - Total For OBFLY13 and N-S and L  Direction: N-S  Bubulcus ibis  1 - Total For OBFLY13 and N-S and L  Direction: N-S  Elevation: M  Shorebird	
shorebird shore spp.  1	
Larus spp.  1 Egretta thula 6 - Total For OBFLY13 and E-W and L  Direction: N-S Elevation: H shorebird  2 - Total For OBFLY13 and N-S and H  Direction: N-S Elevation: L shorebird  1 - Total For OBFLY13 and N-S and L  Direction: N-S Elevation: M shorebird  1 - Bubulcus ibis  1 - Total For OBFLY13 and N-S and L  Direction: N-S Elevation: M shorebird	
birection: N-S Elevation: H  Direction: N-S Elevation: H  Direction: N-S and H  Direction: N-S Elevation: L  Bubulcus ibis  1 Bubulcus ibis 1 Total For OBFLY13 and N-S and L  Direction: N-S Elevation: M  Shorebird  Pubulcus ibis 1 Bubulcus ibis	
Egretta thula  6 - Total For OBFLY13 and E-W and L  Direction: N-S Elevation: H shorebird  2 - Total For OBFLY13 and N-S and H  Direction: N-S Elevation: L shorebird  1 - Total For OBFLY13 and N-S and L  Direction: N-S Elevation: M shorebird  1 - Bubulcus ibis  1 - Bubulcus ibis  1 - Bubulcus ibis	
6 - Total For OBFLY13 and E-W and L  Direction: N-S Elevation: H shorebird  2 - Total For OBFLY13 and N-S and H  Direction: N-S Elevation: L shorebird  1 - Total For OBFLY13 and N-S and L  Direction: N-S Elevation: M shorebird  1 - Bubulcus ibis  1 - Bubulcus ibis	
2 Bubulcus ibis 2 - Total For OBFLY13 and N-S and H Direction: N-S Elevation: L Bubulcus ibis 1 - Total For OBFLY13 and N-S and L Direction: N-S Elevation: M Subulcus ibis 1 - Bubulcus ibis 1 - Total For OBFLY13 and N-S and L Direction: N-S Elevation: M shorebird	
2 Bubulcus ibis 2 - Total For OBFLY13 and N-S and H  OBFLY13 Direction: N-S Elevation: L  1 Bubulcus ibis 1 - Total For OBFLY13 and N-S and L  OBFLY13 Direction: N-S Elevation: M  1 Bubulcus ibis 1 Bubulcus ibis	
DBFLY13 and N-S and H  OBFLY13 Direction: N-S Elevation: L  Bubutcus ibis  1 - Total For OBFLY13 and N-S and L  OBFLY13 Direction: N-S Elevation: M  Bubutcus ibis  1 - Bubutcus ibis  1 - Bubutcus ibis	
OBFLY13 and N-S and H  OBFLY13 Direction: N-S Elevation: L  1 Bubulcus ibis 1 - Total For OBFLY13 and N-S and L  OBFLY13 Direction: N-S Elevation: M shorebird  1 Bubulcus ibis	
OBFLY13 Direction: N-S Elevation: L shorebird  1 Bubulcus ibis 1 - Total For OBFLY13 and N-S and L OBFLY13 Direction: N-S Elevation: M shorebird  1 Bubulcus ibis	
t Bubulcus ibis  1 - Total For OBFLY13 and N-S and L  OBFLY13 Direction: N-S Elevation: M shorebird  1 Bubulcus ibis	
OBFLY13 Direction: N-S Elevation: M shorebird shore ships	
OBFLY13 Direction: N-S Elevation: M  1 shorebird	
shorebird state that the state of the state	
1 - Total For OBFLY13 and N-S and M	

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Common Name Observed	ved Scientific Name		Comments	
Station ID: OBFLY13	Direction: N/A	Elevation: N/A		
NONE 0	none		none	NOME
0	- Total For OBFLY13 and N/A and N/A	and N/A		
Station ID: OBFLY13	Direction: NE-SW	Elevation: L		
GR EC great egret	Casmerodius albus		shorebird	٦
1	- Total For OBFLY13 and NE-SW and L	SW and L		
Station ID: OBFLY13	Direction: NW-SE	Elevation: L		
WF IB 2	Plegadis chihi		shorebird	SSC
2	- Total For OBFLY13 and NW-SE and L	-SE and L		
Station ID: OBFLY13	Direction: S	Elevation: H		
CA EG 3	Bubulcus ibis		shorebird	NL
3	<ul> <li>Total For OBFLY13 and S and</li> </ul>	H pu		
Station ID: OBFLY13	Direction: S-N	Elevation: H		
CA EG 1			shorebird	뉟
cattle egret	Bubulcus ibis			
1	- Total For OBFLY13 and S-N and H	l and H		
Station ID: OBFLY13	Direction: S-N	Elevation: M		
CA EG 2	Rubulous ibis		shorebird	<b>T</b> N

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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SN EG         1         Egretta thula         Eleva           SN EG         4         AG         AG           SN EG         4         AG         Egretta thula           SN EG         4         AG           Sn EG         AG         Egretta thula           A AG         AG         AG           Sn Ed         AG         AG           Atation ID: OBFLY13 and SE-NW         Eleva           CA EG         5         Bubulcus ibis           CA EG         5         Bubulcus ibis           CA EG         5         Bubulcus ibis           Cattle egret         5         Bubulcus ibis           Agation ID: OBFLY13 and SE-NW and H         Station ID: OBFLY13 and Se-NW and H           Station ID: OBFLY13         Direction: SE-NW Eleva           IB CU         Animenius americanus	Elevation: M		
oBFLY13  OBFLY13  S  OBFLY13  S  Durlew  15			
obelly 13  Obelly 13  Sobelly 13  Obelly 13  Obelly 13  Table w		shorebird	NL
obelly 13  OBFLY 13  5  10  OBFLY 13  Surlew  15			:
0BFLY13 5 5 5 10 0BFLY13 15 15 15 15	;	shorebird	ZZ
0BFLY13 5 5 10 0BFLY13 15 2urlew			
5 10 0BFLY13	Elevation: n		
5 10 OBFLY13		shorebird	N
OBFLY13			2
10 OBFLY13 curlew		shorebird	NL
OBFLY13 Dire	and H		
15 billed curlew	Elevation: L		
		shorebird	Z
WF IB 7 AG white-faced lbis Plegadis chihi		shorebird	SSC
22 - Total For OBFLY13 and SE-NW and L	and L		
Station ID: OBFLY13 Direction: SE-NW	Elevation: M		
CA EG 1		shorebird	7
cattle egret Bubulcus ibis			
LB CU 1		shorebird	뉟
long-billed curlew Numenius americanus			
LB CU 2 AG		shorebird	₹
long-billed curlew Numenius americanus			
4 - Total For OBFLY13 and SE-NW and M	and M		

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Common Name Observed	ved Scientific Name		Comments	
Station ID: OBFLY13	Direction: W-E	Elevation: H		
GULLS 10 gulls	Larus spp.		shorebird	Z
10	- Total For OBFLY13 and W-E	V-E and H		
Station ID: OBFLY13	Direction: W-E	Elevation: L		
CA EG 2	Bubulcus ibis		shorebird	Z
SN EG			shorebird	N
snowy egret	Egretta thula			
3	<ul><li>Total For OBFLY13 and W-E and L</li></ul>	V-E and L		
Station ID: OBFLY13	Direction: W-E	Elevation: M		
BC NH			shorebird	SENS
black crowned night-heron	Nycticorax nycticorax			
CA EG 1			shorebird	7
cattle egret	Bubulcus ibis			
CA EG 1			shorebird	₹
cattle egret	Bubulcus ibis			
GULLS 5			shorebird	₹.
gulls	Larus spp.			
8	- Total For OBFLY13 and W-E	V-E and M		
Station ID: OBFLY14	Direction: E-W	Elevation: H		
CA EG 1			shorebird	N
cattle egret	Bubulcus ibis			
CA EG			shorebird	N
cattle egret	Bubulcus ibis			
GULLS 1			shorebird	1

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Common Name Observed	rved Scientific Name		Comments	
,	4 - Total For OBFLY14 and E-W and H	E-W and H		
Station ID: OBFLY14	Direction: E-W	Elevation: L		
CA EG 1	Bubulcus ibis		shorebird	Z
SN EG 2	Egretta thula		shorebird	N
	3 - Total For OBFLY14 and E-W and L	E-W and L		
Station ID: OBFLY14	Direction: E-W	Elevation: M		
CA EG 1	Bubulcus ibis		shorebird	Z
CA EG 1	Bubulcus ibis		shorebird	N
CA EG 1	Bubulcus ibis		shorebird	N
	3 - Total For OBFLY14 and E-W and M	E-W and M		
Station ID: OBFLY14	Direction: N-S	Elevation: H		
DUCKS 2			water	N
ducks	Anas spp., Aythya spp.			
GULLS quils	Larus spp.		shorebird	TV
WF IB 5			shorebird	SSC
WF IB 11	Plegadis chihi		shorebird	ssc
70				

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Common Name Obs	Observed Scientific Name		Comments	
Station ID: OBFLY14	Direction: N-S	Elevation: L		
BNST	9		shorebird	N
black-necked stilt	Himantopus mexicanus			
CA EG	-		shorebird	₹
cattle egret	Bubulcus ibis			
CAEG	-		shorebird	뉟
cattle egret	Bubulcus ibis			
CAEG	-		shorebird	뉟
cattle egret	Bubulcus ibis			
CAEG	_		shorebird	N
cattle egret	Bubulcus ibis			
CA EG	co.		shorebird	뉟
cattle egret	Bubulcus ibis			
	15 - Total For OBFLY14 and N-S and L	-S and L		
Station ID: OBFLY14	Direction: N-S	Elevation: M		
CA EG	2		shorebird	N
cattle egret	Bubulcus ibis			
CAEG	2		shorebird	뉟
cattle egret	Bubulcus ibis			
	4 - Total For OBFLY14 and N-S	-S and M		
Station ID: OBFLY14	Direction: NE-SW	Elevation: H		
CA EG	1		shorebird	JN
cattle egret	Bubulcus ibis			
00 00	-		water	SSC
double-crested cormorant	Phalacrocorax auritus			
0000	1 AG		water	SSC
tangent potonic altitop				

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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	Species Code No. Common Name Observed	Habitat ved Scientific Name		Bird Type Comments	Status
1 Larus spp. 4 - Total For OBFLY14 and NE-SW and H Direction: NW-SE Elevation: H Shorebird Shore	Station ID: OBFLY14				
1 - Total For OBFLY14 and NB-SW and H  Direction: NW-SE Elevation: H  shorebird  1 - Total For OBFLY14 and NW-SE and H  Direction: NW-SE Elevation: L  5 - Bubulcus ibis  5 - Total For OBFLY14 and NW-SE and L  Direction: NW-SE Elevation: M  25 - AG  Numerius americanus  25 - Total For OBFLY14 and NW-SE and M  Direction: S-N Elevation: H  Shorebird  Bubulcus ibis  3 shorebird  Bubulcus ibis  5 - Total For OBFLY14 and S.N. and H		Larus spp.		shorebird	Z
Direction: NW-SE Elevation: H shorebird shorebird shorebird shorebird birection: NW-SE and H Direction: NW-SE Elevation: L shorebird shorebird shorebird birection: NW-SE Elevation: M SE S - Total For OBFLY14 and NW-SE and M SE - Total For OBFLY14 and NW-SE and M SI Shorebird shor	4	- Total For OBFLY14 and NE	-SW and H		
shorebird  Larus spp.  1 - Total For OBFLY14 and NW-SE and H  Direction: NW-SE Elevation: L  Shorebird  Shoreb	Station ID: OBFLY14				
Direction: NW-SE and H  Direction: NW-SE Elevation: L  Shorebird  Bubulous lbis  5 - Total For OBFLY14 and NW-SE and L  Direction: NW-SE Elevation: M  25 AG  Numenius americanus  26 AG  Numenius americanus  27 - Total For OBFLY14 and NW-SE and M  Direction: S-N Elevation: H  Shorebird  Shorebird  3 Bubulous lbis  5 - Total For OBFLY14 and S-N and H		Larus spp.		shorebird	Z
5 Bubulcus ibis  Direction: NW-SE Elevation: L shorebird shored in shorebird  Direction: NW-SE Elevation: M shorebird shored in shorebird shore shored in shorebird shorebird shored in shorebird sh	1	- Total For OBFLY14 and NW	-SE and H		
shorebird  Bubulcus ibis  5 - Total For OBFLY14 and NW-SE and L  Direction: NW-SE Elevation: M  25 AG  Numenius americanus  25 - Total For OBFLY14 and NW-SE and M  Direction: S-N Elevation: H  Shorebird	Station ID: OBFLY14		Elevation: L		
5 - Total For OBFLY14 and NW-SE and L  Direction: NW-SE Elevation: M  25 AG  Numenius americanus  25 - Total For OBFLY14 and NW-SE and M  Direction: S-N Elevation: H  26 - Total For OBFLY14 and NW-SE and M  27 Shorebird  28 Bubulcus ibis  3 Bubulcus ibis  5 - Total For OBFLY14 and S.N and H	e egret	Bubulcus ibis		shorebird	¥
Direction: NW-SE Elevation: M shorebird shoreb	LO.	- Total For OBFLY14 and NW	-SE and L		
25 AG  Numenius americanus  25 - Total For OBFLY14 and NW-SE and M  Direction: S-N Elevation: H  2 Bubulcus ibis 3 Bubulcus ibis 5 - Total For OBFLY14 and S.N and H  5 - Total For OBFLY14 and S.N and H	Station ID: OBFLY14		Elevation: M		
25 - Total For OBFLY14 and NW-SE and M  Direction: S-N Elevation: H  Shorebird  Bubulcus ibis  Bubulcus ibis  Shorebird  Shorebird  Shorebird  Bubulcus ibis	-billed curlew	AG Numenius americanus		shorebird	Z
Direction: S-N Elevation: H  2 Bubulcus ibis 3 Bubulcus ibis 5 - Total For OBELY44 and S-N and H	25	- Total For OBFLY14 and NW	-SE and M		
segret Bubulcus ibis shorebird segret Bubulcus ibis shorebird shorebird segret Bubulcus ibis	Station ID: OBFLY14				
s egret Bubulcus ibis	e egret	Bubulcus ibis		shorebird	V
Bubulcus ibis  7 - Total For OBEI Y44 and S.N and H				shorebird	NL
II .	cattle egret	Bubulcus ibis			
	r.	- Total For OBFLY14 and S-N and H	and H		

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Station ID: OBFLY14   Direction: S-N   Elevation: L   Strocebird   S	Species Code No. Common Name Observed	o. Habitat rved Scientific Name		Bird Type Comments	Status
shorebird  Casmerodius albus  Legretta thula  Egretta thula  Direction: SE-NW Elevation: H  Shorebird  Direction: SE-NW Elevation: H  Shorebird  Shorebird  Numenius americanus  Numenius americanus  Shorebird  Bubulcus ibis  Numenius americanus  Bubulcus ibis  Numenius americanus  Bubulcus ibis  Shorebird  S	Station ID: OBFLY14		Elevation: L		
Herbuicus bis shorebird shores are codius albus shorebird shores.  2				shorebird	¥
1 Egretta thula 5 - Total For OBFLY14 and SE-NW and H  Direction: SE-NW Elevation: H  Subulcus ibis 1 Casmerodius albus 1 Casmerodius albus 1 I Numenius americanus 1 I Numenius americanus 2 Subulcus ibis 1 Casmerodius albus 3 - Total For OBFLY14 and SE-NW and H  Direction: SE-NW Elevation: L  Shorebird  Sho	cattle egret	Bubulcus ibis			
Egretta thula   Shorebird     Egretta thula   Selvation: SE-NW   Elevation: H   Shorebird     Direction: SE-NW   Elevation: H   Shorebird   Shorebird     AG				shorebird	¥
1 Egretta thula  5 - Total For OBFLY14 and S-N and L  Direction: SE-NW Elevation: H  Subbulcus ibis  1	great egret	Casmerodius albus			
Egretta thula  Direction: SE-NW Elevation: H  Bubuicus ibis  1 AG  Bubuicus americanus  1 Numenius americanus  Direction: SE-NW Elevation: L  Bubuicus ibis  2 Shorebird  Bubuicus ibis  1 SE-NW Elevation: L  Shorebird  Sh				shorebird	₩.
5 - Total For OBFLY14 and S-N and L           Direction:         SE-NW         Elevation:         H         Shorebird           2         Bubulcus ibis         shorebird         shorebird           1         AG         shorebird         shorebird           1         Casmerodius albus         shorebird           1         Numenius americanus         shorebird           15 - Total For OBFLY14 and SE-NW and H         shorebird           2         Bubulcus ibis         shorebird           1         Butcrides virescens         shorebird           3         - Total For OBFLY14 and SE-NW and L         shorebird	snowy egret	Egretta thula			
Direction: SE-NW Elevation: H  Bubulcus ibis  1 AG Bubulcus ibis  1 Casmerodius albus  1 Numenius americanus  1 Numenius americanus  1 SE-NW and H  Direction: SE-NW Elevation: L  2 Bubulcus ibis  1 Butorides virescens  3 - Total For OBFLY14 and SE-NW and L		II.	N and L		
2 Bubulcus ibis 1 AG Bubulcus ibis 1 Casmerodius albus 1 Casmerodius albus 1 Numenius americanus 15 - Total For OBFLY14 and SE-NW and H Direction: SE-NW Elevation: L 2 Bubulcus ibis 1 Butorides virescens 1 Setorebird 3 - Total For OBFLY14 and SE-NW and L		l	ı		
Harburicus ibis  1 AG Buburicus ibis 1 Casmerodius albus 1 Numenius americanus 15 - Total For OBFLY14 and SE-NW and H Direction: SE-NW Elevation: L Suburicus ibis 1 Buburicus ibis 1 Butorides virescens 3 - Total For OBFLY14 and SE-NW and L				shorebird	귛
11 AG Bubulcus ibis 1	cattle egret	Bubulcus ibis			
1 Shorebird shore				shorebird	7
1 Shorebird  1 Numenius americanus  15 - Total For OBFLY14 and SE-NW and H  Direction: SE-NW Elevation: L  2 Bubuicus ibis 1 Shorebird 1 Shorebird 3 - Total For OBFLY14 and SE-NW and L	cattle egret	Bubulcus ibis			
1 Numenius americanus 15 - Total For OBFLY14 and SE-NW and H Direction: SE-NW Elevation: L  2 Bubulcus ibis 1 Butorides virescens 3 - Total For OBFLY14 and SE-NW and L				shorebird	뉟
1 Numenius americanus 15 - Total For OBFLY14 and SE-NW and H  Direction: SE-NW Elevation: L  2 Bubulcus ibis 1 Butorides virescens 3 - Total For OBFLY14 and SE-NW and L	great egret	Casmerodius albus			
Numenius americanus  15 - Total For OBFLY14 and SE-NW and H  Direction: SE-NW Elevation: L  2 Bubulcus ibis 1 shorebird 1 shorebird 3 - Total For OBFLY14 and SE-NW and L				shorebird	¥
15 - Total For OBFLY14 and SE-NW and H  Direction: SE-NW Elevation: L  2 Bubulcus ibis 1 shorebird 3 - Total For OBFLY14 and SE-NW and L	long-billed curlew	Numenius americanus			
Direction: SE-NW Elevation: L shorebird shorides virescens shorebird shorebi		II I	-NW and H		
segret Bubulcus ibis shorebird shorebird shorebird shorebird 1 shorides virescens 3 - Total For OBFLY14 and SE-NW and L	Station ID: OBFLY14		Elevation: L		
a egret Bubulcus ibis shorebird shorebird an heron Butorides virescens 3 - Total For OBFLY14 and SE-NW and L				shorebird	뉟
n heron Butorides virescens  3 - Total For OBFLY14 and SE-NW and L	cattle egret	Bubulcus ibis			
m				shorebird	¥
II .	green heron	Butorides virescens			
		II .	:-NW and L		

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Common Name Obs	Observed Scientific Name		Comments	
Station ID: OBFLY14	Direction: SE-NW	Elevation: M		
CA EG cattle egret	1 Bubulcus ibis		shorebird	N
	2 Casmerodius albus		shorebird	N
	3 - Total For OBFLY14 and SE-NW and M	-NW and M		
Station ID: OBFLY14	Direction: SW-NE	Elevation: H		
CA EG cattle egret	1 Bubulcus ibis		shorebird	NL
	1 - Total For OBFLY14 and SW-NE and H	-NE and H		
Station ID: OBFLY14	Direction: SW-NE	Elevation: L		
SN EG snowv egret	1 Earetta thula		shorebird	N
	1 - Total For OBFLY14 and SW-N	-NE and L		
Station ID: OBFLY14	Direction: SW-NE	Elevation: M		
CA EG cattle egret	1 Bubulcus ibis		shorebird	N.
LB CU long-billed curlew	1 Numenius americanus		shorebird	٦
	2 - Total For OBFLY14 and SW-N	-NE and M		
Station ID: OBFLY14	Direction: W-E	Elevation: L		
CA EG cattle egret	1 Bubulcus ibis		shorebird	N
CA EG cattle egret	1 Bubulcus ibis		shorebird	TV.

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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OBFLY14 Dire			e de la constante de la consta	
1 segret	on: W-E	Elevation: L		
egret 1			shorebird	Z
-	Bubulcus ibis			
			shorebird	¥
great egret Casn	Casmerodius albus			
SN EG 1			shorebird	N
snowy egret Egret	Egretta thula			
5 - Total For	- Total For OBFLY14 and W-E and L	E and L		
Station ID: OBFLY14 Direction:	on: W-E	Elevation: M		
CA EG 1			shorebird	Z
cattle egret Bubu	Bubulcus ibis			
	- Total For OBFLY14 and W-E and M	E and M		
Station ID: OBFLY15 Direction:	on: E-W	Elevation: L		
CA EG 1			shorebird	<b>J</b> V
cattle egret Bubu	Bubulcus ibis			
FO TE 1			shorebird	SSC
Forster's tern Stern	Sterna forsteri			
GR HE 1			shorebird	N
green heron Butor	Butorides virescens			
GR.HE 1			shorebird	¬V
green heron Butor	Butorides virescens			
SN EG 1			shorebird	N
snowy egret	Egretta thula			
5 - Total For	- - Total For OBFLY15 and E-W and L	Wy and L		

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Common Name Observed	rved Scientific Name		Comments		
Station ID: OBFLY15	Direction: E-W	Elevation: M			
BLTE 2			shorebird	NL	
black tern	Chlidonias niger				
LB CU 1			shorebird	뉟	
long-billed curlew	Numenius americanus				
8	- Total For OBFLY15 and E-W	-W and M			
Station ID: OBFLY15	Direction: N-S	Elevation: H			
CA EG 6			shorebird	Z	
e egret	Bubulcus ibis				
9	- Total For OBFLY15 and N-S and H	-S and H			
Station ID: OBFLY15	Direction: N-S	Elevation: L			
BN ST 2			shorebird	J.	
black-necked stilt	Himantopus mexicanus				
CA EG 1			shorebird	₹	
cattle egret	Bubulcus ibis				
3	- Total For OBFLY15 and N-S and L	-S and L			
Station ID: OBFLY15	Direction: N-S	Elevation: M			
CA EG 1			shorebird	¥	
cattle egret	Bubulcus ibis				
CA EG 4			shorebird	٦	
cattle egret	Bubulcus ibis				
 	— Total Con Open V46 and N C and M	M Pool S			

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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200	Observed Scientific Name		Comments	
Station ID: OBFLY15	Direction: NW-SE	Elevation: H		
BN ST 7			shorebird	귄
black-necked stilt	Himantopus mexicanus			
CA EG			shorebird	N
cattle egret	Bubulcus ibis			
CA EG 1			shorebird	7
cattle egret	Bubulcus ibis			
CA EG 3			shorebird	₩
egret	Bubulcus ibis			
12	2 - Total For OBFLY15 and NW-S	4-SE and H		
Station ID: OBFLY15	Direction: NW-SE	Elevation: L		
BL TE 1			shorebird	코
black tern	Chlidonias niger			
BN ST			shorebird	₩.
black-necked stilt	Himantopus mexicanus			
CA EG 3			shorebird	N
cattle egret	Bubulcus ibis			
	5 - Total For OBFLY15 and NW-S	4-SE and L		
Station ID: OBFLY15	Direction: NW-SE	Elevation: M		
CA EG 2			shorebird	¥
cattle egret	Bubulcus ibis			
	2 - Total For OBFLY15 and NW-S	V-SE and M		
Station ID: OBFLY15	Direction: S-N	Elevation: H		
CA EG 4			shorebird	뉟
cattle egret	Bubulcus ibis			
	——————————————————————————————————————	II Cua		

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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National Discription   Compaction   Compac	Common Name Observed	rved Scientific Name		Comments	
1 Egretta thuia shorefice. SE-NW Elevation: H shorebird birection: SE-NW Elevation: H shorebird should birection: SE-NW Elevation: H shorebird should birection: W-E Elevation: L shorebird should birection: W-E Elevation: H shorebird should birection: W-E Elevation: H shorebird should birection: E-W Elevation: H shorebird should birection birect	Station ID: OBFLY15				
2 - Total For OBFLY15 and S-N and M  Direction: SE-NW Elevation: H  shorebird  Direction: SE-NW Elevation: H  shorebird  Casmerodius albus  Cohildonias niger  6 - Total For OBFLY15 and W-E and L  Direction: W-E Elevation: M  Direction: W-E Elevation: M  1 - Total For OBFLY15 and W-E and M  Direction: E-W Elevation: H  shorebird  1 - Total For OBFLY15 and W-E and M  Direction: E-W Elevation: H  shorebird  2 - Aurus son				shorebird	Z
2 - Total For OBFLY15 and S-N and M  Direction: SE-NW Elevation: H  shorebird  1				shorebird	₽
Direction: SE-NW Elevation: H  shorebird  Bubulcus ibis  2 - Total For OBFLY15 and SE-NW and H  Direction: W-E Elevation: L  6 - Total For OBFLY15 and W-E and L  Direction: W-E Elevation: M  1 - Total For OBFLY15 and W-E and M  Direction: E-W Elevation: H  Shorebird  1 - Total For OBFLY15 and W-E and M  Direction: E-W Elevation: H  Shorebird  2 - Harris sto			N and M		
1   Bubuicus ibis   Shorebird   Shorebir	Station ID: OBFLY15		ı		
1 Casmerodius albus 2 - Total For OBFLY15 and SE-NW and H  OBFLY15 Direction: W-E Elevation: L 6 - Total For OBFLY15 and W-E and L  OBFLY15 Direction: W-E Elevation: M 1 - Total For OBFLY15 and W-E and M  OBFLY16 Direction: E-W Elevation: H  Shorebird  OBFLY16 Direction: E-W Elevation: H  Shorebird  1 - Total For OBFLY15 and W-E and M  OBFLY16 Direction: E-W Elevation: H  Shorebird  2 shorebird  Shorebird  Shorebird  Shorebird  Shorebird  Shorebird  Shorebird  Shorebird  Shorebird	egret			shorebird	N
2 - Total For OBFLY15 and SE-NW and H  OBFLY15 Direction: W-E Elevation: L  6 - Total For OBFLY15 and W-E and L  OBFLY15 Direction: W-E Elevation: M  1 - Casmerodius albus 1 - Total For OBFLY15 and W-E and M  OBFLY16 Direction: E-W Elevation: H  Shorebird  Bubulcus ibis  2 shorebird	f egret			shorebird	Z
OBFLY15     Direction: W-E     Elevation: L     shorebird       6     Chiidonias niger     A     A       6 - Total For OBFLY15 and W-E and L     A     A       OBFLY15     Direction: W-E     Elevation: M     shorebird       1     Casmerodius albus     A     A       1 - Total For OBFLY15 and W-E and M     A     Shorebird       OBFLY16     Direction: E-W     Elevation: H     shorebird       1     Bubbulcus ibis     shorebird       2     Larus sno     shorebird			-NW and H		
6 Chiidonias niger 6 - Total For OBFLY15 and W-E and L OBFLY15 Direction: W-E Elevation: M shorebird  1 Casmerodius albus 1 - Total For OBFLY15 and W-E and M OBFLY16 Direction: E-W Elevation: H shorebird  2 James sup		I	Elevation: L		
6 - Total For OBFLY15 and W-E and L  OBFLY15 Direction: W-E Elevation: M shorebird  Casmerodius albus  1 - Total For OBFLY15 and W-E and M  OBFLY16 Direction: E-W Elevation: H shorebird  Bubulcus ibis  2 shorebird  Shorebird  shorebird	k tern			shorebird	Z
OBFLY15         Direction: W-E         Elevation: M         shorebird           1 - Total For OBFLY15 and W-E and M         OBFLY16         Direction: E-W         Elevation: H         shorebird           1         Bubulcus ibis         shorebird           2         I arris san           2         I arris san		ll .	E and L		
Casmerodius albus  1 - Total For OBFLY15 and W-E and M  OBFLY16 Direction: E-W Elevation: H  Bubulcus ibis  2 shorebird  shorebird  shorebird  shorebird  shorebird  shorebird					
OBFLY16 Direction: E-W Elevation: H shorebird  1 Bubulcus ibis 2 shorebird  2 shorebird  2 shorebird	Pograf			shorebird	¥
OBFLY16 Direction: E-W Elevation: H  1 shorebird 2 shorebird 2 shorebird		ll .	E and M		
segret Bubulcus ibis shorebird shorebird segret 2 shorebird shorebird			ı		
2 shorebird	s egret			shorebird	N
				shorebird	N

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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		Das	iseu on Direction and Elevation	alla Elevation		ဂရ ဂရ ဂရ ခရိမ
Species Code Common Name O	No. Observed	Habitat   Scientific Name		Bird Type Comments	Status	
	3 - 7	- Total For OBFLY16 and E-W and H	V and H			
Station ID: OBFLY16		Direction: N-S	Elevation: L			
CA EG cattle egret	<b>+</b>	Bubulcus ibis		shorebird	₹	
KILL killdeer	-	Charadrius vociferus		shorebird	Ī	
	12 - T	- Total For OBFLY16 and N-S and L	and L			
Station ID: OBFLY16		Direction: N-S	Elevation: M			
BL TE black tern	2	Chlidonias niger		shorebird	N	
	2 - T	- Total For OBFLY16 and N-S and M	and M			
Station ID: OBFLY16		Direction: N/A	Elevation: N/A			
NONE	0	попе		попе	NONE	
	0 - T	- Total For OBFLY16 and N/A and N/A	and N/A			
Station ID: OBFLY16		Direction: NE-SW	Elevation: L			
CA EG cattle egret	-	Bubulcus ibis		shorebird	N N	
LB CU long-billed curlew	-	Numenius americanus		shorebird	٦	
	2 - 1	- Total For OBFLY16 and NE-SW and L	SW and L			
Station ID: OBFLY16		Direction: NW-SE	Elevation: H			
CA EG cattle egret	1	Bubulcus ibis		shorebird	N	
	1 - 1	- Total For OBFLY16 and NW-SE and H	-SE and H			

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Species Code No Common Name Obs	No. Habitat Observed Scientific Name		Bird Type Comments	Status
Station ID: OBFLY16	Direction: NW-SE	Elevation: M		
CA EG cattle egret	2 Bubulcus ibis		shorebird	N
CA EG cattle egret	3 Bubulcus ibis		shorebird	N
	5 - Total For OBFLY16 and NW-SE and M	V-SE and M		
Station ID: OBFLY16	Direction: S-N	Elevation: H		
CA EG cattle egret	1 Bubulcus ibis		shorebird	NL
	1 - Total For OBFLY16 and S-N and H	N and H		
Station ID: OBFLY16	Direction: S-N	Elevation: M		
CA EG cattle egret	2 Bubulcus ibis		shorebird	NL
	2 - Total For OBFLY16 and S-N and M	N and M		
Station ID: OBFLY16	Direction: SW-NE	Elevation: M		
CA EG cattle egret	1 Bubulcus ibis		shorebird	N
	1 - Total For OBFLY16 and SW-N	V-NE and M		
Station ID: OBFLY16	Direction: W-E	Elevation: L		
GR HE green heron	1 Butorides virescens		shorebird	N
GR HE green heron	2 Butorides virescens		shorebird	N
GR HE green heron	3 Buforides virescens		shorebird	Z
5				

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Common Name Observed	rved Scientific Name		Comments	
Station ID: OBFLY16	Direction: W-E	Elevation: L		
SN EG snowy egret	Earetta thula		shorebird	N
<u></u>	.   Tot	-E and L		
Station ID: OBFLY16	Direction: W-E	Elevation: M		
BL TE 3	Chlidonias niger		shorebird	- N
	3 - Total For OBFLY16 and W-E and M	LE and M		
Station ID: OBFLY17	Direction: E-W	Elevation: H		
DC CO double-crested cormorant	Phalacrocorax auritus		water	SSC
	Total For OBFLY17 and E-W and H	-W and H		
Station ID: OBFLY17	Direction: E-W	Elevation: M		
GULLS 1	Larus spp.		shorebird	N
KILL 1	Charadrius vociferus		shorebird	N
	2 - Total For OBFLY17 and E-W and M	W and M		
Station ID: OBFLY17	Direction: N-S	Elevation: H		
BN ST 12 black-necked stilt	Himantopus mexicanus		shorebird	N
CA EG 1	Bubulcus ibis		shorebird	N
CA TE	Ctorns noonis		shorebird	SSC
Caspian tern	CONCORD CONCORD			

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Species Code Common Name	No. Observed	Habitat   Scientific Name	Name		Bird Type Comments	Status
Station ID: OBFLY17		Direction: N-S	Ņ	Elevation: H		
CORM	2				water	₩.
cormorant		Phalacrocorax spp.	dds xe			
00 00	20				water	SSC
double-crested cormorant	ant	Phalacrocorax auritus	ax auritus			
DUCKS	2				water	
ducks		Anas spp., Aythya spp.	ythya spp.			
GR EG	-				shorebird	N
great egret		Casmerodius albus	s albus			
GR EG	_				shorebird	TV.
great egret		Casmerodius albus	s albus			
GULLS	2				shorebird	₹
sling		Larus spp.				
SNEG	2				shorebird	
snowy egret		Egretta thula				
SNEG	9				shorebird	¬N
snowy egret		Egretta thula				
	50 - T	- Total For OBFLY17 and N-S and H	Y17 and N-Sa	H pui		
Station ID: OBFLY17		Direction: N-S	ý	Elevation: L		
GR HE	-				shorebird	N
green heron		Buforides virescens	escens			
CULLS	31				shorebird	7
sling		Larus spp.				
KILL	3				shorebird	N
killdeer		Charadrius vociferus	ociferus			
I	35 - T	- Total For OBFLY17 and N-S and L	Y17 and N-S a	ind L		
	- 11					

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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	-		Scientific Name		Comments	
Station ID: OBFLY17	]	Direction:	N-S	Elevation: M		
BC NH	-				shorebird	SENS
black crowned night-heron		Nycticol	Nycticorax nycticorax			
CA EG	<u>-</u>				shorebird	¥
cattle egret		Bubulcus ibis	siqi sr			
CAEG	2				shorebird	¥
cattle egret		Bubulcus ibis	siqi sr			
CAEG	ო				shorebird	뉟
cattle egret		Bubulcus ibis	siqi sr			
CA EG	4				shorebird	¥
cattle egret		Bubulcus ibis	siqi sr			
GULLS	7				shorebird	₹
gulls		Larus spp.	.dc			
SNEG	<u>-</u>				shorebird	뉟
snowy egret		Egretta thula	thula			
SNEG	_				shorebird	¥
snowy egret		Egretta thula	thula			
SNEG	<sub>ش</sub>				shorebird	¥
snowy egret		Egretta thula	thula			
	18 -	Total For O	Total For OBFLY17 and N-S and M	and M		
Station ID: OBFLY17		Direction:	NE-SW	Elevation: H		
CAEG	က				shorebird	₽.
cattle egret		Bubulcus ibis	siqi sr			
GR EG	_				shorebird	¥
greaf egret		Casmer	Casmerodius albus			
SNEG	_				shorebird	¥
snowy egret		Egretta thula	thula			
SNEG	2				shorebird	V
snowy egret		Egretta thula	thula			

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Bird Type Status Comments			- shorebird NL				shorebird			shorebird			shorebird NL				shorebird NL		
Species Code No. Habitat Common Name Observed Scientific Name	10 - Total For OBFLY17 and NE-SW and H	Station ID: OBFLY17 Direction: NE-SW Elevation: L	CA EG 1	cattle egret Bubulcus ibis	1 - Total For OBFLY17 and NE-SW and L	Station ID: OBFLY17 Direction: NE-SW Elevation: M	GULLS 1 Larus spp.	1 - Total For OBFLY17 and NE-SW and M	Station ID: OBFLY17 Direction: NW-SE Elevation: H	CA EG 3 Bubulcus ibis	3 - Total For OBFLY17 and NW-SE and H	Station ID: OBFLY17 Direction: NW-SE Elevation: L	CA EG 2	cattle egret Bubuicus ibis	2 - Total For OBFLY17 and NW-SE and L	Station ID: OBFLY17 Direction: NW-SE Elevation: M	SNEG 1	snowy egret	1 - Total For OBFLY17 and NW-SE and M

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Species Code Common Name C	No. Observed	Habitat d Scientific Name		Bird Type Comments	Stafus
Station ID: OBFLY17		Direction: S-N	Elevation: H		
BC NH black crowned night-heron	ا د	Nycticorax nycticorax		shorebird	SENS
BL SK black skimmer	<b>←</b>	Rynchops niger		shorebird	ĪV.
BN ST black-necked stilt	2	Himanfopus mexicanus		shorebird	TZ
CA EG cattle egret	-	Bubulcus ibis		shorebird	Z
CA EG cattle egret	2	Bubulcus ibis		shorebird	TN
CORM cormorant	~	Phalacrocorax spp.		water	Z
GULLS gulls	₹	Larus spp.		shorebird	٦
SN EG snowy egret	-	Egretta thula		shorebird	TN.
	10	щЩ	and H		
CA EG cattle egret	r.	Direction: 3-IN Bubulcus ibis	Elevation: L	shorebird	<b>T</b> Z
CA EG cattle egret	rc.	Bubulcus ibis		shorebird	N
GR HE green heron	-	Butorides virescens		shorebird	TV.
GR HE green heron	2	Butondes virescens		shorebird	N
GR HE green heron	2	Butorides virescens		shorebird	72

Notes: "NR" = not recorded

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# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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March   Comments   Comments				F	2:,5-70
Direction: S-N   Elevation: L   shorebird				ond Type Comments	Status
Surface         1         Numeritus americanus         shorebird           St         Egretia thulia         shorebird           OBFLY17         Direction: S-N         Elevation: M         shorebird           Ned might-heron         Nycticorax nycticorax         Shorebird         shorebird           6         Bubulcus lbis         water         shorebird           1         Arras spp., Aythya spp.         shorebird         shorebird           1         Charactius vociferus         shorebird         shorebird           1         Charus spp.         shorebird         shorebird           1         Charus spp.         shorebird         shorebird           1         Charus spp.         shorebird         shorebird           2         Bubulcus lbis         shorebird         shorebird           6         Larus spp.         shorebird         shorebird           7         Bubulcus lbis         s	Station ID: OBFLY17				
Storetia thula   Storetia thula				shorebird	N
Sepectable of the state of the st	long-billed curlew	Numenius americanus			
## Egretia thuis    24 - Total For OBFLY17 and S-N and L				shorebird	¥
24 - Total For OBELY17 and S-N and L           OBFLY17         Direction: S-N         Elevation: M         shorebird           red night-heron         Nycticorax nycticorax         shorebird           6         Bubulcus ibis         shorebird           1         Anas spp., Aythya spp.         water           1         Anas spp., Aythya spp.         shorebird           1         Charachius vociferus         shorebird           30         Total For OBFLY17 and S-N and M         shorebird           Charus spp.         shorebird         shorebird           1         Bubulcus ibis         shorebird           60         Larus spp.         shorebird           61         Larus spp.         shorebird	snowy egret	Egretta thula			
OBFLY17         Direction: S-N         Elevation: Manage in the propertion of the properties of t	24		and L		
ned night-heron         1         Nycticorax nycticorax           3         Bubulcus ibis         shorebird           6         Bubulcus ibis         water           1         Anas spp., Aythya spp.         shorebird           1         Larus spp.         shorebird           30         - Total For OBFLY17 and S-N and M         shorebird           OBFLY17         Direction: SE-NW         Elevation: H           60         Larus spp.         shorebird           61         Larus spp.         shorebird           62         Larus spp.         shorebird           61         Larus spp.         shorebird           61         Larus spp.         shorebird					
ned night-heron         Nycticorax nycticorax         shorebird           6         Bubulcus ibis         shorebird           1         Anas spp., Aythya spp.         water           1         Anas spp., Aythya spp.         shorebird           1         Charadrius vociferus         shorebird           30         - Total For OBFLY17 and S-N and M         shorebird           OBFLY17         Direction: SE-NW         Elevation: H         shorebird           60         Larus spp.         shorebird         shorebird           61         Lotal For OBFLY17 and SE-NW and H         shorebird         shorebird				shorebird	SENS
Bubulous ibis   Shorebird   Shorebird   Shorebird   Shorebird   Shorebird   Shorebird     Anas spp.	black crowned night-heron	Nycticorax nycticorax			
Bubulcus ibis   Shorebird     Anas spp., Aythya spp.     1				shorebird	N N
Anas spp., Aythya spp.     Anas spp., Aythya spp.     Anas spp., Aythya spp.     Larus spp.     Charadrius vociferus     30 - Total For OBFLY17 and S-N and M     Bubulcus ibis     60	cattle egret	Bubulcus ibis			
1				shorebird	
1	cattle egret	Bubulcus ibis			
Anas spp., Aythya spp.  1				water	
18 Larus spp.  1 Charadrius vociferus 30 - Total For OBFLY17 and S-N and M  OBFLY17 Direction: SE-NW Elevation: H  1 Bubulcus ibis 60 Larus spp. 61 - Total For OBFLY17 and SE-NW and H	ducks	Anas spp., Aythya spp.			
1 Charadrius vociferus 30 - Total For OBFLY17 and S-N and M  OBFLY17 Direction: SE-NW Elevation: H  Bubulcus ibis 60 Larus spp. 61 - Total For OBFLY17 and SE-NW and H				shorebird	NL
Charactrius vociferus  30 - Total For OBFLY17 and S-N and M  OBFLY17 Direction: SE-NW Elevation: H  Burbulcus ibis  60  Larus spp.  61 - Total For OBFLY17 and SE-NW and H	gulls	Larus spp.			
Charadrius vociferus  30 - Total For OBFLY17 and S-N and M  OBFLY17 Direction: SE-NW Elevation: H  shorebird  Burbuicus ibis  60  Larus spp.  61 - Total For OBFLY17 and SE-NW and H				shorebird	¥
OBFLY17 and S-N and M OBFLY17 Direction: SE-NW Elevation: H  **Rubulcus lbis**  60  **Larus spp.**  Carus spp.**	killdeer	Charadrius vociferus			
OBFLY17 Direction: SE-NW Elevation: H shorebird shortcus ibis  60	36	1 1	and M		
egret Bubulcus ibis shorebird shorebird segret 60 shorebird shorebird shorebird starus spp.					
egret Bubulcus ibis shorebird shorebird Larus spp.  60 Larus spp. 61 - Total For OBFLY17 and SE-NW and H				shorebird	TV.
60 shorebird  Larus spp.  61 - Total For OBFLY17 and SE-NW and H	cattle egret	Bubulcus ibis			
61				shorebird	N.
	gulls	Larus spp.			
	6		NW and H		

Notes: "NR" = not recorded

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### **Based on Direction and Elevation**

Total Number of Birds Observed In Each Station

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Bird Type Status Comments		shorebird			shorebird	shorebird				shorebird	shorebird	shorebird NL			shorebird	
Species Code No. Habitat Common Name Observed Scientific Name	Station ID: OBFLY17 Direction: SE-NW Elevation: L	GULLS 2 Larus spp.	2 - Total For OBFLY17 and SE-NW and L	Station ID: OBFLY17 Direction: SE-NW Elevation: M	CA EG 1 Bubulcus ibis	20	gulls Larus spp.	21 - Total For OBFLY17 and SE-NW and M	Station ID: OBFLY17 Direction: SW-NE Elevation: H	CA EG 2 Bubulcus ibis	CA EG 3 Bubulcus ibis	GR EG 2 Casmerodius albus	7 - Total For OBFLY17 and SW-NE and H	Station ID: OBFLY17 Direction: W-E Elevation: H	BL TE 4 Chirdonias niger	4 - Total For OBFLY17 and W-E and H

# Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Species Code Common Name Obs	No. Habitat Observed Scientific Name	Bird Type Comments	Status
Station ID: OBFLY18	Direction: E-W Elevation: L		
WHIMB whimbrel	2 Numenius phaeopus	shorebird	N
	2 - Total For OBFLY18 and E-W and L		
Station ID: OBFLY18	Direction: E-W Elevation: M		
LBCU	2	shorebird	7
long-billed curlew	Numenius americanus		
WHIMB	2	shorebird	₩
whimbrel	Numenius phaeopus		
	4 - Total For OBFLY18 and E-W and M		
Station ID: OBFLY18	Direction: N-S Elevation: L		
WHIMB	r	shorebird	N.
whimbrel	Numenius phaeopus		
	3 - Total For OBFLY18 and N-S and L		
Station ID: OBFLY18	Direction: N/A Elevation: N/A		
NONE	0	none	NONE
none	попе		
NONE	0	попе	NONE
попе	поле		
NONE	0	none	NONE
none	none		
NONE	0	none	NONE
none	none		
	0 - Total For OBFLY18 and N/A and N/A		

Notes: "NR" = not recorded

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### Total Number of Birds Observed In Each Station Based on Direction and Elevation

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Bird Type Status Comments		shorebird				shorebird NL				shorebird NL		
	Elevation: H			W-SE and H	Elevation: L			N and L	Elevation: H			E and H
Species Code No. Habitat Common Name Observed Scientific Name	Station ID: OBFLY18 Direction: NW-SE	WHIMB 1	whimbrel Numenius phaeopus	1 - Total For OBFLY18 and NW	Station ID: OBFLY18 Direction: S-N	KILL 3	Killdeer Charadrius vociferus	3 - Total For OBFLY18 and S-N and L	Station ID: OBFLY18 Direction: W-E	E.T. 1	elegant tern Stema elegans	1 - Total For OBFLY18 and W-E and H

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CA EG         STUBBLE-PLOW         shorebird           Cax EG         Total For A3A         shorebird           Cattle egret         Bubulcus lbis         shorebird           Cattle or ID: A3B         50         ALFALFA         shorebird           Cattle egret         T5         AG         shorebird           CA EG         ALFALFA         shorebird           SITL         ALFALFA         shorebird           KILL         ALFALFA         shorebird           MILE         T ALFALFA         shorebird           WILL         ALFALF	Species Code Common Name	No. Observed	Habitat Scientific Name	Bird Type Comments	Status	Date
2 STUBBLE-PLOW Bubulcus ibis 2 - Total For A3A  2 - Total For A3A  50 ALFALFA Bubulcus ibis 75 AG Bubulcus ibis 0 ALFALFA Casmerodius albus 1 ALFALFA Charadrius vociferus 1 ALFALFA? Charadrius vociferus 1 ALFALFA? Charadrius samericanus 1 ALFALFA? Egretta thuia 1 ALFALFA Catoptrophorus semipalmatus 23 - Total For A3B  23 - Total For A3B  2 AG Sayornis nigricans	Station ID: A3A					
<ul> <li>50 ALFALFA Bubulcus ibis</li> <li>75 AG Bubulcus ibis</li> <li>0 ALFALFA Casmerodius aibus</li> <li>1 ALFALFA Charadrius vociferus</li> <li>10 ALFALFA? Charadrius vociferus</li> <li>11 ALFALFA? Charadrius samericanus</li> <li>11 ALFALFA? Egretta thuia</li> <li>1 ALFALFA? Catoptrophorus semipalmatus</li> <li>23 ALFALFA</li> <li>1 AG, CANAL Faico sparverius</li> <li>1 AG, CANAL Faico sparverius</li> <li>2 AG</li> <li>5 AG</li> <li>5 AG</li> <li>5 Sayornis nigricans</li> </ul>	CA EG cattle egret	2	STUBBLE-PLOW Bubulcus ibis	shorebird	N	09/22/94
50 ALFALFA Bubulcus ibis 75 AG Bubulcus ibis 0 ALFALFA Casmerodius albus 1 ALFALFA Charadrius vociferus 11 ALFALFA? Charadrius wociferus 11 ALFALFA? Numenius americanus 11 ALFALFA? Egretta thula 11 ALFALFA? Catoptrophorus semipalmatus 23 ALFALFA Catoptrophorus semipalmatus 23 - Total For A3B  1 AG, CANAL Faico sparverius 2 AG						
50 ALFALFA Bubulcus ibis  0 ALFALFA Casmerodius albus Charactrius vociferus 1 ALFALFA Charactrius vociferus 1 ALFALFA Charactrius vociferus 1 ALFALFA Charactrius semicanus 1 ALFALFA ALFALFA ALFALFA Catoptrophorus semipalmatus 23 ALFALFA Catoptrophorus semipalmatus 23 - Total For A3B  1 AG, CANAL Falco sparverius Sayornis nigricans	Station ID: A3B	1				
Bubulcus ibis  AG Bubulcus ibis  0 ALFALFA Casmerodius albus  1 ALFALFA? Charadrius vociferus  1 ALFALFA? Charadrius vociferus  1 ALFALFA? Charadrius semicanus  1 ALFALFA? Charadrius semipalmatus  23 ALFALFA Catoptrophorus semipalmatus  232 - Total For A3B  1 AG, CANAL Falco sparverius  2 AG Sayornis nigricans	CAEG	20	ALFALFA	shorebird	₹	10/04/94
AG Bubulcus ibis Bubulcus ibis ALFALFA Casmerodius albus Casmerodius albus Charadrius vociferus Charadrius vociferus Charadrius vociferus ALFALFA Charadrius vociferus ALFALFA Numenius americanus ALFALFA Plegadis chihi 3 ALFALFA Catoptrophorus semipalmatus	cattle egret		Bubulcus ibis			
Bubulcus ibis  0 ALFALFA Casmerodius albus  1 ALFALFA Charadrius vociferus  1 ALFALFA Charadrius vociferus  1 ALFALFA Numenius americanus  1 ALFALFA? Egretta thula 1 ALFALFA? Egretta thula 23 ALFALFA Catoptrophorus semipalmatus  232 - Total For A3B  1 AG, CANAL Faico sparverius 2 AG Sayornis nigricans	CAEG	75	AG	shorebird	Z	10/04/94
0 ALFALFA Casmerodius albus 1 ALFALFA Charadrius vociferus 1 ALFALFA? Charadrius americanus 1 ALFALFA? Egretta thula 1 ALFALFA Plegadis chihi 3 ALFALFA Catoptrophorus semipalmatus 232 - Total For A3B Falco sparverius 5 AG CANAL Falco sparverius Sayornis nigricans	cattle egret		Bubulcus ibis			
Casmerodius albus  1 ALFALFA Charadrius vociferus  1 ALFALFA? Charadrius americanus  1 ALFALFA? Egretta thula  1 ALFALFA Plegadis chihi 3 ALFALFA Catoptrophorus semipalmatus  232 - Total For A3B  1 AG, CANAL Faico sparverius Sayornis nigricans	GREG	0	ALFALFA	shorebird	N	10/04/94
1 ALFALFA Charadrius vociferus 1 ALFALFA? Charadrius vociferus 100 ALFALFA? Numenius americanus 1 ALFALFA? Egretta thula 1 ALFALFA Plegadis chihi 3 ALFALFA Catoptrophorus semipalmatus 232 - Total For A38  1 AG, CANAL Falco sparverius 2 AG Sayornis nigricans	great egret		Casmerodius albus			
Charadrius vociferus  Charadrius vociferus  Charadrius vociferus  Charadrius semericanus  Numenius americanus  ALFALFA?  Egretta thula  1 ALFALFA  Plegadis chihi  3 ALFALFA  Catoptrophorus semipalmatus  Catoptrophorus semipalmatus  232 - Total For A3B  1 AG, CANAL  Falco sparverius  2 AG  Sayornis nigricans	KILL	_	ALFALFA	shorebird	₹	10/04/94
1 ALFALFA? Charadrius vociferus 100 ALFALFA Numenius americanus 1 ALFALFA? Egretta thula 1 ALFALFA Plegadis chihi 3 ALFALFA Catoptrophorus semipalmatus 232 - Total For A3B  1 AG, CANAL Falco sperverius 2 AG Sayornis nigricans	killdeer		Charadrius vociferus			
Charadrius vociferus  100 ALFALFA Numenius americanus  1 ALFALFA? Egretta thula  1 ALFALFA Plegadis chihi 3 ALFALFA Catoptrophorus semipalmatus  232 - Total For A3B  1 AG, CANAL Falco sparverius  2 AG Sayornis nigricans	KILL	-	ALFALFA?	shorebird	Z	09/22/94
100 ALFALFA Numenius americanus  1 ALFALFA? Egretta thula 1 ALFALFA Plegadis chihi 3 ALFALFA Catoptrophorus semipalmatus  232 - Total For A3B  1 AG, CANAL Falco sparverius 2 AG Sayornis nigricans	killdeer		Charadrius vociferus			
Numenius americanus  1 ALFALFA?	LBCU	100	ALFALFA	shorebird	N	10/04/94
1 ALFALFA?     Egretta thula 1 ALFALFA     Plegadis chihi 3 ALFALFA     Catoptrophorus semipalmatus     Catoptrophorus semipalmatus     Total For A3B  1 AG, CANAL     Falco sperverius     Sayornis nigricans	long-billed curlew		Numenius americanus			
Egretta thula  ALFALFA Plegadis chihi  3 ALFALFA Catoptrophorus semipalmatus  Catoptrophorus semipalmatus  1 AG, CANAL Falco sparverius  2 AG Sayornis nigricans	SNEG	1	ALFALFA?	shorebird	Z	09/22/94
1 ALFALFA Plegadis chihi 3 ALFALFA Catoptrophorus semipalmatus  232 - Total For A3B  1 AG, CANAL Falco sparverius 2 AG Sayornis nigricans	snowy egret		Egretta thula			
3 ALFALFA Catoptrophorus semipalmatus  232 - Total For A3B  1 AG, CANAL Falco sperverius 2 AG Sayornis nigricans	WF IB	-	ALFALFA	shorebird	SSC	10/04/94
3 ALFALFA Catoptrophorus semipalmatus 232 - Total For A3B  1 AG, CANAL Falco sparverius 2 AG Sayornis nigricans	white-faced ibis		Plegadis chihi			
232 - Total For A3B  1 AG, CANAL Falco sparverius 2 AG Sayornis nigricans	WILL	က	ALFALFA	shorebird	Z	10/04/94
232 - Total For A3B  1 AG, CANAL Falco spanverius 2 AG Sayornis nigricans	willet		Catoptrophorus semipalmatus			
1 AG, CANAL Falco sparverius 2 AG Sayornis nigricans			- Total For A3B			
rican kestrel Falco sparverius  2 AG  Phoebe Sayornis nigricans	Station ID: D24	1				
erican kestrel Falco spanverius 2 AG k phoebe Sayornis nigricans	AM KE	<b>.</b>	AG, CANAL	raptor	Z	12/16/99
<b>2</b> AG k phoebe Sa <i>yornis nigricans</i>	American kestrel		Falco sparverius			
	BL PH	2	AG	passerine	N	05/11/00
	black phoebe		Sayornis nigricans			

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01/07/00 06/23/00 00/80/90 12/17/99 06/08/00 12/17/99 12/16/99 06/23/00 06/08/00 12/17/99 05/26/00 04/14/00 06/23/00 05/11/00 05/26/00 Date Status NONE SSC SSC SSC SSC SSC SSC 뉟  $\exists$ 뉟 뉟 뉟 뉟 뉟 Ħ Bird Type Comments passerine passerine passerine passerine shorebird shorebird shorebird shorebird raptor raptor raptor raptor raptor raptor Quiscalus mexicanus Charadrius vociferus Charadrius vociferus Agelaius phoeniceus Agelaius phoeniceus Agelaius phoeniceus Speotyto cunicularia Speotyto cunicularia Scientific Name Speotyto cunicularia Speotyto cunicularia Speotyto cunicularia Speotyto cunicularia Calidris minutilla ALFALFA AGR ALFALFA AGR **Bubulcus** ibis AG, CANAL Habitat PLOWED PLOWED PLOWED CANAL none Ą AG ΑG AG AG Observed ģ ٠. 2 ო 5 75 N S N N S ↽ N 0 20 Common Name red-winged blackbird red-winged blackbird red-winged blackbird great tailed grackle Station ID: D24 Species Code burrowing owl burrowing owl burrowing owl least sandpiper burrowing owl burrowing owl burrowing owl cattle egret killdeer killdeer BU OW BUOW BU OW BU OW BUOW BU OW none GTGR CA EG RW BL LESA NONE RW BL 축 Z |-

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Species Code Common Name	No. Observed	Habitat Scientific Name	Bird Type Comments	Status	Date
Station ID: D24					
WE SA western sandpiper	2	AG, CANAL Calidris mauri	shorebird	N	12/16/99
	167 -	- Total For D24			
Station ID: D25					
BU OW	<b>-</b>	AG	raptor	SSC	04/28/00
burrowing owl		Speotyto cunicularia			
BU OW	2	AG	raptor	SSC	06/23/00
burrowing owl		Speotyto cunicularia			
BU OW	2	PLOWED	raptor	SSC	02/56/00
burrowing owl		Speotyto cunicularia			
CA EG	-	PLOWED	shorebird	Z	05/26/00
cattle egret		Bubulcus ibis			
CA EG	7	PLOWED	shorebird	₹	05/11/00
cattle egret		Bubulcus ibis			
KILL	1	PLOWED	shorebird	N	05/11/00
killdeer		Charadrius vociferus			
NONE	0	AG	none	NONE	01/31/00
none		попе			
RW BL	-	AG	passerine	₹	04/28/00
red-winged blackbird		Agelaius phoeniceus			
RW BL	£	AG	passerine	₹	06/23/00
red-winged blackbird		Agelaius phoeniceus			
RW BL	40	AGR	passerine	N	03/31/00
red-winged blackbird		Agelaius phoeniceus			
RW BL	50	AGR	passerine	N	03/31/00
red-winged blackbird		Agelaius phoeniceus			
	105	- Total For D25			

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05/23/02 05/31/02 02/06/02 02/06/02 05/14/02 05/14/02 06/05/02 06/14/02 04/26/02 05/14/02 04/26/02 05/23/02 Date Status NON M NON M SENS NONE SENS Į 뉟 뉟 뉟 뉟 Bird Type Comments ground dweller shorebird shorebird shorebird shorebird shorebird raptor none none none none none Geococcyx californianus Charadrius vociferus Common Name Observed Scientific Name Falco sparverius AG & WETLAND Ardea herodias Ardea herodias 4 - Total For MIDWAY AGRI-MARSH - Total For OB1 SUBSTATION Egretta thula Developed Developed Larus spp. OW & AG Habitat AGRI AGRI AGRI попе none none попе none ŝ 6 0 က φ 0 0 0 m 0 Station ID: MIDWAY greater roadrunner Station ID: OB2 Station ID: OB1 American kestrel great blue heron great blue heron Species Code snowy egret killdeer none GULLS none none none GRRO gulls AM KE 분 명 none 분 명 NoN NONE NONE SNEG NONE NONE

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1   1   1   1   1   1   1   1   1   1	Species Code Common Name	No. Observed	Habitat Scientific Name	Bird Type Comments	Status	Date
10   100	Station ID: OB2					
0   NOME   NOME   NOME     0   AGRI	NONE	。 I	попе	none	NONE	05/31/02
10   10   10   10   10   10   10   10	HINOIN	c		CHOCK	HACIN	06/05/02
0         none         none         NONE           3         - Total For OB2         none         NONE           0         none         none         NONE           0         none         none         NONE           0         none         none         NONE           0         none         none         NONE           0         AGRI         none         NONE           2         Charadrius vociferus         shorebird         NL           2         Charadrius vociferus         shorebird         NL		>	none	D	1	20,000
AGRI   NONE   NONE     3	NONE	0		none	NONE	06/14/02
0         AGRI         none         NONE           1         none         none         NONE           0         none         none         NONE           0         none         none         NONE           0         none         none         NONE           0         AGRI         NONE<	none		none			
3 - Total For OB2   0   Inone   Inon	NONE	0	AGRI	none	NONE	05/14/02
3         - Total For OB2         NOME           0         none         NOME           1         none         NOME           0         none         NOME           0         none         NOME           0         none         NOME           0         AGRI         none         NOME           0         AGRI         NOME           0         - Total For OB3         NA           2         Charactrus vociferus         shorebird         NL           2         Charactrus vociferus         NL	none		none			
0         none         none         NONE           0         none         NONE           0         none         NONE           0         none         NONE           0         AGRI         none         NONE           0         AGRI         none         NONE           0         AGRI         none         NONE           0         -Total For OB3         none         NONE           2         Charactrius vociferus         shorebird         NL           2         Charactrius vociferus         shorebird         NL			- Total For OB2			
0         none         none         NONE           0         none         NONE           0         none         NONE           0         none         NONE           0         AGRI         none         NONE           0         AGRI         none         NONE           0         AGRI         NONE         NONE           0         - Total For OB3         NONE         NONE           2         Charactrius vociferus         shorebird         NL           2         Charactrius vociferus         NL	Station ID: OB3					
0         none         NONE           1         none         NONE           2         none         NONE           3         none         NONE           4         none         NONE           5         none         NONE           6         AGRI         none         NONE           9         AGRI         none         NONE           1         none         NONE           2         charadrius vociferus         shorebird         NL           2         Charadrius vociferus         shorebird         NL	NONE	。 I		none	NONE	04/26/02
0         none         NONE           0         none         NONE           0         none         NONE           0         none         NONE           0         AGRI         none         NONE           0         AGRI         none         NONE           1         none         None         None           2         - Total For OB3         shorebird         NL           2         Charadrius vociferus         shorebird         NL           2         Charadrius vociferus         NC	none		none			
0         none         no	NONE	0		none	NONE	05/23/02
0         none         none         none         none         NONE           1         none         none         NONE           2         - Total For OB3         none         NONE           2         - Total For OB3         NL           2         Charadrius vociferus         shorebird         NL           2         Charadrius vociferus         NL	none		попе			
D         none         none         NONE           0         AGRI         none         NONE           0         AGRI         none         NONE           0         - Total For OB3         shorebird         NL           2         Charadrius vociferus         shorebird         NL           2         Charadrius vociferus         NL	NONE	0		none	NONE	05/31/02
0	none		none			
O         Hone         NONE           0         AGRI         NONE           1         0         - Total For OB3         NONE           2         Shorebird         NL           2         Charadrius vociferus         shorebird         NL           2         Charadrius vociferus         NL         NL	NONE	0		none	NONE	06/05/02
none         none         NONE           0         AGRI         NONE           0         - Total For OB3         Shorebird         NL           2         Charadrius vociferus         Shorebird         NL           2         Charadrius vociferus         Shorebird         NL	none		none			
Hone           0         AGRI         NONE           1         0         - Total For OB3         NUT           2         Shorebird         NL           2         Shorebird         NL           2         Charadrius vociferus         NL           2         Charadrius vociferus         NL	NONE	0		попе	NONE	06/14/02
0         AGRI         none         NONE           0         - Total For OB3         shorebird         NL           2         Shorebird         NL           2         Shorebird         NL           2         Shorebird         NL           2         Charadrius vociferus         NL	попе		поле			
none         none           0         - Total For OB3           2         shorebird         NL           2         shorebird         NL           2         charadrius vociferus         NL	NONE	0	AGRI	none	NONE	05/14/02
2     Shorebird       Charadrius vociferus     shorebird       2     Charadrius vociferus       2     Shorebird       A Charadrius vociferus     NL	none		попе			
2 Shorebird NL Charadrius vociferus shorebird NL Charadrius vociferus						
2         Shorebird         NL           deer         Charadrius vociferus         shorebird         NL           deer         Charadrius vociferus         NL	Station ID: <b>OB4</b>					
deer     Charadrius vociferus       2     shorebird     NL       deer     Charadrius vociferus	KILL	7 		shorebird	뉟	04/26/02
2 shorebird NL deer Charadrius vociferus	killdeer		Charadrius vociferus			
	KILL	2		shorebird	Ī	05/31/02
	killdeer		Charadrius vociferus			

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Common Name	Observed	Scientific Name	Comments	Status	) day
Station ID: OB4					
KILL killdee <b>r</b>	မှ	Charadrius vociferus	shorebird	¥	05/23/02
NONE	0		попе	NONE	06/05/02
none		поле			
NONE	0	лоле	none	NONE	06/14/02
NONE	0	AGRI	none	NONE	05/14/02
none		none			
	10 -	- Total For OB4			
Station ID: OB5					
KILL	- Γ		shorebird	¥	04/26/02
killdeer		Charadrius vociferus			
NONE	0		none	NONE	05/23/02
none		попе			
NONE	0		none	NON	05/31/02
none		none			
NONE	0		none	NONE	06/05/02
none		none			
NONE	0		none	NONE	06/14/02
попе		попе			
NONE	0	AGRI	none	NONE	05/14/02
none		поле			
	1 -	- Total For OB5			
Station ID: OBI1					
BN ST	7 1	AG	shorebird	¥	05/17/01
black-necked stilt		Himantopus mexicanus			
CA EG	τ-	AG	shorebird	¥	05/17/01
cattle egret		Bubulcus ibis			

### **Abundance Survey**

Page 7 of 11 Total Number of Birds Observed In Each Station

Species Code Common Name	No. Observed	Habitat Scientific Name	Bird Type Comments	Status	Date
Station ID: OB11					
GB HE great blue heron	<b>ι</b>	AGRI Ardea herodias	shorebird	SENS	05/14/02
KILL Killdeer	-	AG Charadrius vociferus	shorebird	¥	05/04/01
KILL killdeer	-	AG Charadrius vociferus	shorebird	¥	05/17/01
NONE none		AG none	none	NONE	10/17/01
NONE		AG none	попе	NONE	11/15/01
NONE		AG none	none	NONE	11/20/01
NONE		AG none	none	NONE	11/27/01
NONE		AG none	none	NONE	01/10/02
NONE	0	поле	попе	NONE	04/26/02
NONE	0	поле	none	NONE	05/23/02
NONE	0	попе	none	NONE	05/31/02
NONE	0	попе	none	NONE	06/05/02
NONE	0	поле	попе	NONE	06/14/02
NONE	0	AG none	none	NONE	04/13/01
NONE none	0	AG none	none	NONE	06/08/01

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Station ID: OBIT           NOME         AG         AG         NOME	Species Code Common Name	No. Observed	Habitat Scientific Name	Bird Type Comments	Status	Date
1	Station ID: OBI1					
100	NONE none	0	AG none	none	NONE	06/28/01
100	RW BL	4	AG	passerine	7	05/17/01
100   AG   AG     110   A Galeius phoeniceus   Passerine   Passe	red-winged blackbird		Agelaius phoeniceus			
10   Agelaius phoeniceus   10   Agelaius phoeniceus phoeniceus   10   Agelaius phoeniceus phoenic	RW BL	100	AG	passerine	J <sub>N</sub>	05/03/01
410 - Total For OBI1           AG         Inche         NONE           AG         NONE         NONE           AG         NONE         NONE           AG         Inche         NONE           AG         Inch	red-winged blackbird		Agelaius phoeniceus			
1         Specify to curricularia         raptor         SSC           AG         none         NONE           1         AG         NONE           1         AG         NONE           2         AG         NONE           3         AG         NONE           4         AG         NONE           5         AG         NONE           6         AG         NONE           9         AG         NONE           10         AG         NONE						
owing owl         1         Specify to curricularia         reaptor         Reptor           owing owl         AG         NONE         NONE           owing owl         AG         NONE         NONE           owing         AG         NONE         NONE           owing         None         NONE         NONE           owing         None         NONE         NONE           owing         None         None	Station ID: OBI2					
owing owl         AG         NONE           a         AG         NONE           b         AG         NONE           c	BU OW	_		raptor	SSC	05/23/02
AG         Inone         NONE           AG         NONE         NONE	burrowing owl		Specify cunicularia			
AG         NONE           AG         NONE           AG         NONE           NONE         NONE           AG         NONE           NONE         NONE           AG         NONE           NONE         NONE	NONE		AG	none	NONE	10/17/01
AG         HONE         NONE           AG         NONE         NONE           AG         AG         NONE           AG         NONE         NONE           AG         AG         NONE	none		попе			
AG         NONE	NONE		AG	none	NONE	11/15/01
AG         HODRE         NONE           AG         NONE         NONE           B         AG         NONE	none		попе			
AG         NONE           1 AG         NONE           2 AG         NONE           3 AG         NONE           4 AG         NONE           5 AG         NONE           6 AG         NONE           8 AG         NONE           9 AG         NONE           1 AG         NONE           1 AG         NONE           1 AG         NONE           2 AG         NONE           3 AG         NONE           4 AG         NONE           5 AG         NONE           6 AG         NONE           7 AG         NONE           8 AG         NONE	NONE		AG	none	NONE	11/20/01
AG         none         NONE           AG         none         NONE           B         none         NONE           Inone         AG         NONE           Inone         NONE         NONE           Inone         AG         NONE	none		none			
AG         Inone         NONE           B         10         NONE           B         10         NONE           B         10         NONE           B         100         AG           B         100         NONE	NONE		AG	none	NONE	11/27/01
AG         HOONE         NONE           10         NONE         NONE	none		попе			
Inone         Inone <th< td=""><td>NONE</td><td></td><td>AG</td><td>none</td><td>NONE</td><td>12/13/01</td></th<>	NONE		AG	none	NONE	12/13/01
0         none         NONE           0         none         NONE           0         none         NONE           3         none         none           3         none         NONE           3         AG         NONE           4         AG         NONE           8         AG         NONE           9         AG         NONE	попе		попе			
10         none         none         NONE           2         none         none         NONE           3         none         none         NONE           4         AG         none         none         NONE	NONE	0		none	NONE	04/26/02
0         none         NONE           1         none         none         NONE           3         AG         NONE         NONE           4         AG         NONE         NONE	none		none			
D         none         NONE           3         none         none           3         none         NONE           4         AG         NONE           5         AG         NONE	NONE	0		none	NONE	05/31/02
D         none         NONE           3         none         none           3         AG         none           4         AG         NONE           5         AG         NONE	none		none			
Inone         Inone <th< td=""><td>NONE</td><td>0</td><td></td><td>none</td><td>NONE</td><td>06/05/02</td></th<>	NONE	0		none	NONE	06/05/02
1	none		попе			
3 none none none none NONE	NONE	0		none	NONE	06/14/02
none NONE and	попе		попе			
	NONE	0	AG	none	NONE	04/13/01
	none		попе			

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06/28/01 05/14/02 02/06/02 05/04/01 06/08/01 05/17/01 05/17/01 04/13/01 Date Status NONE NONE NONE SSC 뉟 뉟 Į Bird Type Comments passerine shorebird shorebird raptor none none none none Himantopus mexicanus Agelaius phoeniceus Speotyto cunicularia pecies Code No. Habitat Common Name Observed Scientific Name - Total For OBI2 Bubulcus ibis none none none AGRI none ĄĠ AG AG ΑG AG AG Ŋ 0 0 4 0 0 S red-winged blackbird Station ID: OBI3 Station ID: OBI2 black-necked stilt Species Code burrowing owl cattle egret none none none BUOW none RW BL CA EG NONE NONE NONE NONE BNST

04/26/02

Ħ

10/17/01

NONE

11/15/01

NONE NONE

none

none

04/26/02

뉟

shorebird

shorebird

06/05/02

뉟

04/13/01

뉟

passerine

Quiscalus mexicanus

Bubulcus ibis

4

ΑĞ

S

great tailed grackle

mallard

MALL

none

NON

NONE

none

2

Bubulcus ibis

cattle egret

CA EG

CA EG

cattle egret

GT GR

က

Anas platyrhynchos

поле

AG

none

ΑG

water

### Total Number of Birds Observed In Each Station **Abundance Survey**

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Species Code Common Name	No. Observed	Habitat Scientific Name	Bird Type Comments	Status	Date
Station ID: OBI3					
NONE none		AG none	none	NONE	11/20/01
NONE		AG	none	NONE	11/27/01
none		попе			
NONE		AG	none	NONE	12/13/01
none		попе			
NONE	0		none	NONE	05/23/02
none		none			
NONE	0		none	NONE	05/31/02
none		попе			
NONE	0		none	NONE	06/14/02
none		поле			
NONE	0	AG	none	NONE	05/03/01
none		none			
NONE	0	AG	none	NONE	06/08/01
none		попе			
NONE	0	AG/DIST	none	NONE	06/28/01
попе		поле			
NONE	0	AGRI	none	NONE	05/14/02
none		попе			
RW BL	100	AG	passerine	Z	05/04/01
red-winged blackbird		Agelaius phoeniceus			
YH BL	7	AG	passerine	ź	04/13/01
yellow-headed blackbird	ird	Xanthocephalus xanthocephalus			
	165 -	Total For OBI3			
Station ID: PLANT	•				
BNST	, -	AGRI	shorebird	¥	05/14/02
black-necked stilt		Himantopus mexicanus			
KILL	7	AGRI	shorebird	Z	05/14/02
killdeer		Charadrius vociferus			

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04/26/02 02/06/02 09/22/94 09/22/94 10/04/94 Date NONE SENS Status Ħ Bird Type Comments shorebird shorebird none none none Common Name Observed Scientific Name Casmerodius albus Ardea herodias - Total For PLANT 1 - Total For POWER - Total For T3A2 - Total For T3A1 Habitat stubble ref hq none none none ALF ŝ ო 0 0 0 0 0 Station ID: POWER Station ID: PLANT Station ID: T3A1 Station ID: T3A2 Station ID: T3A3 great blue heron Species Code great egret none none none 品品 GREG NONE NON NONE

10/17/94

뉟

shorebird

Casmerodius albus

great egret

GREG

alfalfa

0

none

none

NON

ALFALFA

- Total For T3A3

2

none

09/22/94

9